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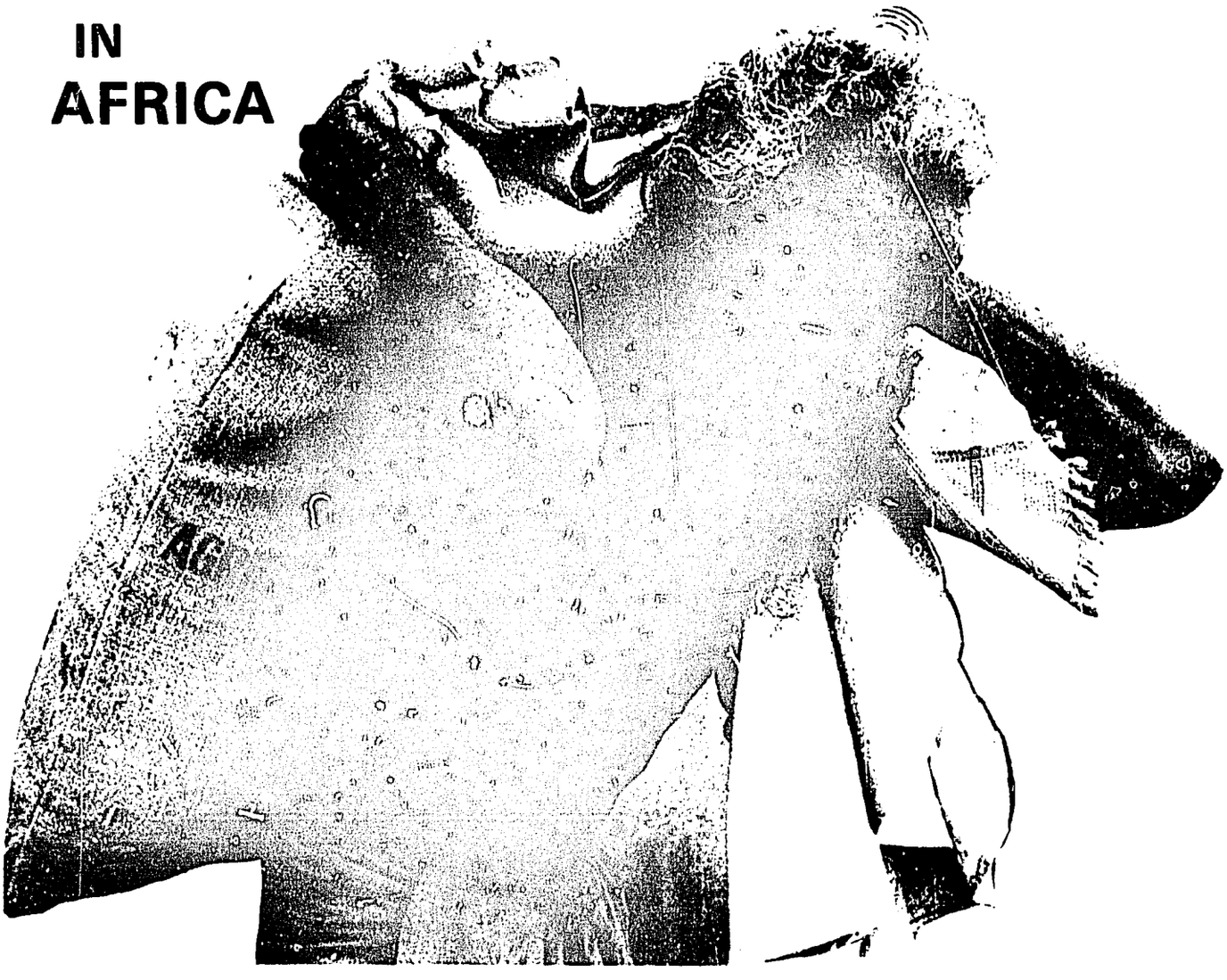
COUNTRY PAPERS

SMALL FARMER CREDIT IN AFRICA



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~~Volume VI of the AID Spring Review of Small Farmer Credit in Africa. Credit in African consists of twelve separate reports describing the program characteristics and evaluation of farm credit as it is institutionalized in the various African countries. The titles and authors of these reports are as follows:~~

1. "The Small Farmer Agricultural Credit in Ivory Coast" by The Staff of the National Bank for Agricultural Development.
2. "National Center for Promotion of the Cooperative Enterprises" by Samuel Nnebe.
3. "Institutional Credit for Smallholder Farmers: A Case Study of the Western Nigeria Agricultural Credit Corporation" by A. Ijose and J.N. Abaelu.
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COUNTRY PROGRAM

BANQUE NATIONALE POUR LE DEVELOPPEMENT AGRICOLE

PRÊTS DE SOUDURE

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by:
The Staff
BNDA

Abidjan
February, 1973

BANQUE NATIONALE POUR LE DEVELOPPEMENT AGRICOLE
(B.N.D.A.)
A B I D J A N

A.I.D.

SPRING REVIEW OF SMALL FARMER CREDIT

Country Program Paper

The Small Agricultural Credit in Ivory-Coast

The "PRETS DE SOUDURE" of the B.N.D.A.(1)

I - INTRODUCTION

Since 1968, the B.N.D.A. (Banque Nationale pour le Développement Agricole) has taken the place of the "Caisse Nationale de Crédit Agricole" (C.N.C.A.). Since then, this national bank is the only organization specialized in granting credit to the small planter in Ivory-Coast.

It is a banking institution of national interest, ruled by the common law of the join-stock companies. The state of Ivory-Coast is the largest shareholder, the other shareholders being the "Caisse de Stabilisation" of prices for agricultural products, the "Banque Centrale des Etats de l'Afrique de l'Ouest", and the "Caisse Centrale de Coopération Economique.

In the same way, the private commercial banks grant agricultural credit, but they limit themselves to the well-established planters, presenting a guarantee and having a sound and satisfactory financial standing.

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(1) The best translation of "prêt de soudure" is "make-both-ends-meet-credit". It will not be translated into english in the following pages

The public societies of sectorial development also make loans to the small farmers, but only for specific operations such as palm-oil tree, cocoa, rice.

However, these loans are long or short term, alloted to finance a part of the investments.

For his short term needs, the Ivorian has recourse to uninstitutional credit granted by local tradesmen who ask a high rate of interest.

The B.N.D.A. has a large scope of activity :

- short term credit to the small planter,
  - "prêts de soudure"
  - country loans,
- short or medium term individual credit for financing either operating costs or investments ;
- credit to public societies, either for their cash operations or for investments ;
- short term credit to agricultural organizations for commercialization of coffee and cocoa ;
- administration of public funds allocated to a field of activity and used as loans (extension or renovation funds, etc).

The above mentionned program only regards the "prêt de soudure" representing an important part of B.N.D.A.'s activity. During the fiscal year 1970-71 which begins on the 1rst of October, this credit amounted to : 1,106,000,000 CFA out of 6,127,000,000 CFA representing the total amount of granted loans, that is to say 18 % and 2,182 associations have benefited from these loans. In 1971-72, the total amount of the "prêts de soudure" allocated was fairly less than 1,600,000,000 CFA.

II - CHARACTERISTICS OF THE PROGRAM

A - Basic information

1. Historical background

The "prêts de soudure" had already been well established by the "Caisse Nationale de Crédit Agricole", when this organization had to stop its activity because of difficulties in financial administration. The B.N.D.A. accepted the responsibility for C.N.C.A.'s activities, but prudently, so that they could keep permanently financial balance and a viable management.

The evolution in the "prêts de soudure" during the Bank's first financial years for the entire country is illustrated in the following table :

Trading year	Number of loans	Number of recipients	Amount in millions of CFA
1968-1969	280	5 635	125 695
1969-1970	462	8 248	187 361
1970-1971	1 042	20 913	437 550
1971-1972	2 182	46 755	1 106 325
1972-1973	9 155	74 805	1 480 873

2. Relationship with the national credit system

In fact, the "prêts de soudure" are the prerogative of the B.N.D.A., the only public bank for agricultural credit in Ivory Coast. The private commercial banks are also interested in this activity and some of them seem to be desirous of trying this experience on a small scale. But, given the economic, social, and political implications of these loans,

when they are granted on a large scale, the government is anxious to keep them under its control. The B.N.D.A. will probably remain the largest shareholder in the whole volume of this kind of credit.

3. B.N.D.A. 's other activities

These activities have been mentionned in the Introduction (p. 1).

4. Relationship whit the preexisting local institutions

The only agricultural credit institution existing before the B.N.D.A. was the "Caisse Nationale de Credit Agricole". The B.N.D.A. assumed for its own account the C.N.C.A.'s activities, because of its inhability to meet its liabilities, but with new financial resources : especially, as he did not have to take in charge C.N.C.A. 's liabilities.

Moreover, the activity of the "prêts de soudure" had already been developped by the C.N.C.A. The B.N.D.A. continued this line of development, but with a stricter control. Likewise, a part of C.N.C.A.'s staff has been reemployed in the B.N.D.A. 's offices.

Apart from that, relations between these two organizations consisted in communications about the precarious situation of their borrowers. As far as relations with other public societies are concerned, in special cases, the B.N.D.A. uses of other organizations as credit sub-distributors.

For example, this is the case of C.F.D.T. (Compagnie des Fibres et Textiles Tropicaux) and exceptionally of some cooperatives. The amount of sub-distributed loans is always inferior, if compared to the whole amounttand the B.N.D.A. always controls carefully the distribution and the collection.

Private commercial banks are also interested in the activity of "prêts de soudure", and some of them are trying to draw up programs of this kind in some regions. Moreover, to the extent which the "prêts de soudure" encourage savings, the commercial banks having a local agency can benefit from the increased amount of farmer's savings.

5. Types of agriculture and production potentiel

The farmers benefiting from these loans employ a double system of production :

- food production for self-consumption,

- commercialized products for monetary income.

The commercialized products are, in the southern part of the country : coffee, cocoa, sometimes rice or Indian corn, more rarely palm-oil trees. In the north, cotton, sometimes swamp rice.

The potential of production varies. A simple family coffee plantation can cover from 0,5 to several dozen acres.

B - The main objectives

The first aim of these "prêts de soudure" is to free the farmer of debt from traditional lenders, local tradesmen who demand a high rate interest. It is absolutely compulsory to free the farmer from debts in order to promote an extension work.

In fact, at present, all surplus in production is absorbed by traditional credit. The farmer has no interest to do his best to increase his yield.

Once he is free from this traditional credit, the farmer should be able to earn enough money between harvests to meet his own needs.

Subsequently he will become self-sufficient and not need B.N.D.A.'s credit. Finally, he must be educated to save beyond his immediate needs, thus acquiring sufficient savings to be invested in productivity.

This institution of "prêts de soudure" is desired by the government and is in line with their policy of development.

1. For how long are these loans granted ?

a) Intention

The aim is to enable the farmer to supply himself and his family with their ordinary needs, from the end of one harvest to the beginning of the following, that is to say during a time when he has no monetary income.

b) The loans are therefore granted from June, July, August (according to the region) (distribution period), to January, February or March of the following year (refund period). 31rst of March is the latest date on which the money can be refunded.

c) Organization

2. General structure

The land is divided into 12 regions. In each of them is a B.N.D.A. agency with a head, sometimes a technical advisor and a book-keeper.

3. Local structure

The head of the local agency is responsible for the loan distribution and refund, up to a ceilling established for each agency by the head office.

Farmers make small groups of at least 7 farmers, which are not instituted by a law : this allows a mutual security.

The request in brought to an advisory board composed of local qualified authorities, before being submitted to the B.N.D.A. Head Office.

4. Recipients

a) Criteria of selection

Farmers entirely dependant upon agriculture for their income (from 21 to 64 years of age) ;

- an agricultural group which has not totally reimbursed the loan cannot be recipient of subsequent credit.

b) Selection policy

At the beginning, the "prêts de soudure" were widely distributed. But later on, the Bank allocated only to those farmers who had demonstrated their reliability more important loans for fertilizers, other products or for investments.

c) Number and type

It is at present impossible to show a distribution of the recipients according to their characteristics, but the amount of the loan is calculated on the production : the loan is equal in value to a maximum of 15 % of the average of the commercialized production of the 2 previous years. The ceiling for each borrower is 50,000 CFA.

d) Other channels of credit

If the borrower judges that the amount of the loan is not sufficient, his only other recourse is to the traditional lenders.

e) Profile of the group organization

Groups are made up of people knowing each other (basic rule of the mutual security), belonging to the same village, sometimes to the same family, in the wide meaning of the term. Therefore, they are perfectly integrated in the african traditional social structure. From the point of view of the exploitation, their structure is homogeneous : the size may present important variations, according to the size of the family, but the system of production and the technics are always the same.

The main difference lies in the use, to a greater or smaller extent of hired manpower.

C - Credit policy and procedures

1. Portofolio

The planter can benefit from one loan at a time. He can renew it for several consecutive years, but as mentioned above, the Bank wishes the planter to become self-sufficient within a few years.

Until now, this wish has not been fully realized, because the greater part of the groups ask for subsequent loans. The amount of this loan ins calculated on the production of the two previous years (see above).

2. Rate of interest

There is a 10 % interest, whatever the terms of the loans may be. This rate may seem high, but it has been perfectly well accepted by the farmers who used to pay 100 % on 6 months to the traditional lenders.

3. Guarantees

Mutual security is provided by memberships in the group. Moreover, the "prêts de soudure" are partly guaranteed by the Government.

4. Other recipients

None

5. Technique of control

As there is no prescription for the use of these "prêts de soudure", therefore there is no control. The procedure is simplified, only basic information is required

about the recipient's identity, such as name, surname, age, village where he lives, identity card (possibly).

As far as crops are concerned, on which the amount of the loan is established, the declarations of the recipients are most of the time accepted.

D - Collection of loans

1. Rate of unpaid loans

The rate of unpaid loans have been :

1.43 % for 1969-70,
1.05 % for 1970-71,
1.78 % for 1971-72.

2. Method

The reimbursment is made in cash, paid directly to the Head of the Agency, who visits the villages after summoning the farmers.

3. Procedure of constraint

As a rule, there exists a monetary penalty for delay, but it is difficult to enforce this rule. The only effective penalty is to refuse a new loan to the groups who haven't totally reimbursed their loan on time. In fact, the solidarity between farmers, united for mutual security, is a reliable guarantee. Moreover, heads of agency generally can enlist the help of local authorities who put pressure on the farmers.

4. Report of maturity

There is never a report of maturity for that kind of loan.

E - Cost and financing

1. Loss and Profit

Given there are few unpaid loans, this operation is advantageous for the B.N.D.A. For the trading year 1971-72, the agencies' expenses were estimated at 85 million CFA and yet, the money reimbursed, including unpaid loans, reached 90 million CFA. Some agencies, open at the Government's request in the poorest countries, for social reasons, cannot balance their accounts.

2. Administrative costs

See below.

3. Savings of the recipients

No personal contribution is required from the recipient for this type of short term credit. But it is hoped that this credit will enable him to increase his savings.

4. Other sources of revenue

At the beginning, the Bank was obliged to finance the "prêts de soudure" entirely from its own funds. Since last year, the B.C.E.A.O. (Banque Centrale des Etats de l'Afrique de l'Ouest) has agreed to rediscount up to 30 % of the total amount of B.N.D.A.'s loans.

5. Solvency

The above-mentionned figures indicate that the Bank experiences no major difficulty in this operation, except in the finding of funds to meet the rapidly increasing demand for "prêts de soudure".

6 - Balance of Trade

Having no precise information about the use of these "prêts de soudure" we cannot ascertain as to their influence on the foreign market. But given that they are used for financing the farmer's current needs, their influence is not likely to be important.

F - Other comments

This above mentionned program requires no other comments.

III - APPRECIATION OF THE PROGRAM

A - Results

1. Apparent use of the credit

The "prêts de soudure" are actually used for the farmer's current needs : food, clothing, sometimes for the wages of hired man-power working on his plantation. But his most important monetary need is for his children's school expenses, at the re-opening of school such as books, paper, uniforms, etc.

2. Influence of "prêt de soudure"

a) On the production :

None

b) On the farmer's income :

Decrease of his debt at a high rate of interest ;

c) On farming techniques utilized :

None

d) On savings :

it is too soon to notice if these loans really enable the farmer to increase his savings.

e) On employment :

None

f) On the social and politic organization :

This is an intricate question. The existing consulting board composed of the sub-prefect, the head of the local agricultural area and influential farmers reinforces S.N.D.A.'s administrative power as well as the traditional authority.

On the other hand, the fact that the amount of the loan is proportional to the production tends to reinforce the influence of the richer planters, but this ten dency is controled since the maximum amount accorded is limited to 50,000 CFA.

It is impossible to give more precise information because of a lack of any extensive sociological analysis of these structures.

3. Progress in relation with the other aims

The "prêt de soudure" has a positive influence on the farmer's standard of living.

4. Overall view

a) The planter's attitude

The "prêts de soudure" are in great demand. The B.N.D.A. cannot meet this demand. Planters complain that the amount of the loans are not sufficient. They agree with this rate of interest and are accustomed to B.N.D.A. 's procedures.

b) General view of the program

The program is sound and considered by the public as a success. However, officials are well aware of its possible dangers from the political and economic (risk of inflation) standpoint. Likewise they recognise the social consequences. Therefore, it is necessary to control carefully the volume of the loans.

B - Procedure of evaluation and feed-back

a) The program's procedure of evaluation

Apart from the control of accountancy, the B.N.D.A. used to visit the farmers in their villages each year to make estimations concerning the "prêts de soudure"'s problems and consequences. Moreover the monthly reports of the heads of agencies allow a control of the operations.

b) Feed-back and modifications in the program

Until now, the results of the inquiries and control have only introduced minor modifications in the procedure.

C - Problems

a) From the governmental point of view :

To the extent to which the "prêts de soudure" allow an increasing consumption, there exists a risk of inflation, but for the present moment the volume of the loans is not sufficient to induce this inflation.

b) From the B.N.D.A.'s point of view :

The main problems are :

- the finding of other financial sources for these "prêts de soudure". It is abnormal to expends B.N.D.A. funds (on permanent resources) rather than on allotments for long term investments.

- management problems caused by the ever increasing volume of loans. Until now, these problems have been solved.

- education. These "prêts de soudure" should be completed by an education of the farmer, in order to show him the long term interest of the operation, the durable profit he can derive from it and to encourage savings.

The B.N.D.A. has not a sufficiently large qualified staff to ensure this education.

c) From the planter's point of view :

In most instances, the loans are not sufficiently high to allow him to meet his needs.

D - Conclusion concerning credit to the small planter

1. Main problems of the small planter

The Ivorian agriculture remains extensive, the limits to the intensification are :

- the planters' lack of motivation,
- his lack of technical knowledge,
- his lack of funds.

A sound education would solve some of these problems. It would show to the farmer the necessity of intensive cultures and thus furnishing savings to partly finance this intensification.

The B.N.D.A. does its best to provide this education by its agents in the villages, but these are too few and lack of human formation. It is necessary to ask other organisms to collaborate. This collaboration is active with public societies who assume the technical popularization and with the C.D.N.A.P.M.C. in the field of cooperatives, mainly as regards commercialization credits.

2. The part played by B.N.D.A. credit

Obviously it is essential because savings are not sufficient by themselves to finance the extension work. On the other hand, public investments should be devoted to substructures, to collective equipment, and to the financing of long term production projects, such as grubbing of land, planning works, etc.

The agricultural credit will remain essential to finance either a part of the farmers' working expenses which cannot be financed by himself, mainly as it is a matter of introducing new "imports" to intensify the production, or short and medium term productive investments.

3. Credit and new technology

a) An extensive contribution of capital is essential but not sufficient. It would remain inoperative without an appropriate education.

b) Maintenance of a development program. At present, in Ivory-Coast, the main obstacle to an extension work does not seem to be the lack of credit, generally speaking. But sociological reasons (social traditional structures), or economic reasons (the cost of production, low selling prices, terms of exchange) are the major obstacles.

4. Conditions of success or failure

The program "prêts de soudure" is successful because it corresponds to the real needs of the farmer. It is the key to an extension work. But we cannot go further ; other programs must take the initiative from where we leave off. These organizations are numerous in Ivory-Coast (palm-oil tree, coconut, cocoa, rice Projects, regional planning programs, rice and cotton projects in the North, etc.).

5. How could the program be improved ?

The "prêts de soudure" could be increased thus enabling all the small planters to benefit from them, provided we keep a strict control over the economic and political implications of this increase. The ideal would be to reach progressively new strata of planters, when the present recipients of these loans succeed in self-financing. No major changing are to be brought in methods and procedures.

From a general point of view, creation of small local unions (cooperative or mutual insurance compagny) or credit union would solve more easily the small planter's credit and savings problems. We are now studying this problem.

IV - THE PART PLAYED BY THE TECHNICAL ADVISORS

a) The help of the A.I.D. :

None

b) Other help :

The B.N.D.A. benefits from the technical help from the "Caisse Centrale de Cooperation Economique" (France) which supplies it with head staff (5). Likewise, the Ivorian Government allows it two head staff, agro-economists belonging to the french study Boards.

c) Effects :

It is obvious that this technical help is now necessary for the good management of the Bank. The Ivorian authorities rightly wish that local head staff should take the place of these foreign staff. To make it possible, the B.N.D.A. with the help of the Caisse Centrale de Coopération Economique is putting forth an effort in the training of its staff.

d) Recommendations

The B.N.D.A.'s problems have been mentionned above. The two major problems are :

- sources of financing,
- training of the staff.

All proposal from the A.I.D. to bring an help in these lines would be favourably studied by the B.N.D.A.'s services.

BIBLIOGRAPHY

- B.N.D.A. 's annual reports,
- Private documents.

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COUNTRY PAPER

CENTRE NATIONAL DE PROMOTION DES ENTREPRISES COOPERATIVES

(CENAPEC)

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by:
Samuel Nnebe
Institut Africain pour le
Developpement Economique et Social
(INADES)

Abidjan
December, 1972

I - PROGRAM CHARACTERISTICS

B - Background

1. Historical summary

The history of cooperatives and cooperative mouvements startec in the Ivory Coast with the creation in september 1959 of the "Centre National de Coopération et de la Mutualité Agricole" (CNCMA). The aim of this Center was to arouse the creation of primary cooperatives and to sustain and develop a few cooperatives that were then in existence. This it did by educative action and vulgarisation* and undertook commercialization on behalf of cooperators.

Very soon the organism ran into difficulties of all sorts : financial difficulties, lack of qualified cadres, insufficient participation, (or complete lack of it) on the part of co-operators and excessive dimension of operation. Above all the effort at cooperative promotion seemed to have come from the top and the co-operators were not given the indispensible training and education ; nor was there any on-the-spot technical support and control. In 1964, the C.N.C.M.A. declared its failure and disappeared. However, it had managed to help the founding of hundreds of cooperatives in the country and these needed the support and control of government services.

A new cooperative service was therefore installed by the ministry of agriculture within the "Direction de l'Enseignement Agricole et des Structures chargée des problèmes humains du développement rural".

This service immediately started sending study missions to prepare the installation of cooperation agents on the spot and to set up intervention program.

...

* Vulgarisation = extension, dissemination

The mission, after making contacts with the competent authorities (administrative and prefectural), recommended the training and education of co-operators and the full staffing of the Cooperative Service to enable it discharge this duty.

A law was promulgated on august 5, 1966 on the statute of cooperation in the Ivory Coast. Henceforth any would-be cooperative will have one to three years of probation during which the conditions of success will be assembled : study of economic conditions and functioning education of cooperators and leaders of the grouping. During this period the group which will be known as "a group with cooperative vocation" will determine its life conditions and draw up a practical program of activities.

The application of this law led to the reclassing of the existi cooperatives after enquiry to know how many of them had survived. They were either maintained as cooperatives or as groups with cooperative vocation destined to become cooperatives or disappear.

In 1967 direct actions in favor of cooperatives were undertaken in the different regions. Based on the result of five cooperative tests in the departments by agents of cooperation these actions aimed at promoting groups in the context of Departmental Development Programs.

At the same time, an action in tended to realize the training and annual education of 105 cadres of selected cooperatives completed by annual crash program for 105 trained cadres was launched at Bingerville (near Abidjan) and in the departments. In addition there were trainings organised for cooperation agents and seminars for cooperators and civil servants of the ministry of agriculture.

The results were very encouraging and the Ivorian Government decided to go further inits action of training and assistance to cooperatives. This meant that farmers would be well educated on the merits of cooperatives. It also meant that adequate technical support had to be given to cooperatives and that cooperative actions had to be inte-

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grated. To achieve this would need much in the way of capital. This was why the government asked the United Nations to help in the realization of a National Center for the Promotion of Cooperative Enterprises charged with the promotion of cooperative mouvement in the Ivory Coast.

This request was submitted for examination to the Board of Administration of the U.N.D.P. (Special funds) in january 1968. The request were accepted and a plan of operations fixing the details of intervention of the International Labour organization (I.L.O.) designated as execution agency was signed on february 13 1969 by the Ivory Coast, the ILO and the U.N.D.P. Special funds. The plan gave rise to the creation at Bingerville, in the old buildings of the former College of cadres, of Centre National de Promotion des Entreprises Cooperatives (CENAPEC) which started functioning as from october 1969. CENAPEC was built to serve the whole country.

2. Relation to National Credit System

The CENAPEC does not give credits. Even if it wanted to do so, it would have to find the necessary funds. But it does play an important part in the granting of agriculture credits by the Banque Nationale pour le Développement Agricole (B.N.D.A.). In effect the B. N. D. A. gives a good part of its credits for agricultural comercialization to cooperatives and cooperative groupings. It is the CENAPEC that tells the B.N.D.A. if an applying cooperative is legally constituted and sound. If the credit is accorded, CENAPEC must offer to see to the training of members of the cooperative in the art of credit management.

3. Other program activities

The training of members of cooperatives is already a very important job. Most of these cooperatives are agricultural. CENAPEC seconds some of its staff to the cooperatives to help them in diverse ways : weighing and selection of products, contacting export houses for the buying of agricultural products.

4. Relation to pre-existing local institutions

The founding of the CENAPEC has been described above. Its work is rather very specialized and there is not much competition with other

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institutions. CENAPEC must have drawn some ideas from the defunct C.N.C.I. It is part of the ministry of agriculture but apart from that, it is original. Officers are drawn from the ILO and the ministry of agricultur er just employed.

5. Agricultural patterns and potentials

CENAPEC is a national institution and therefore covers all the regions of the Ivory Coast. The Ivory Coast exports coffee, cocoa, pineapples, bananas, rubber, palm oil... Cotton and rice production has been increasing at a fast rate. Most of the plantations (over 90 %) of coffee and cocoa belong to individual Ivorian farmers. So are rice and cotton. Others like rubber, palm tree, coconut, belong to big companies for the most part. 70 % of the banana plantations belong to "colons" and European companies. New superior varieties are being introduced.

Initially the Ivory Coast's main agricultural products are cof (4.100.000 bags in 1971-1972) ; cocoa (220.000 tons in 1971-1972), and bananas (194.000 tons in 1970). But the export of pineapples has tremendously increased (142.000 tons in 1970). The Ivory Coast is also one of the African producers of palm oil (50 000 tons in 1970). Not long ago heavy investments were made on rubber plantations and it is expected that in a few years time the Ivory Coast will be competing seriously with Nigeria and Liberia. Attention is also paid to the production of coconuts, sugar cane, kenaf...

B - Objectives

1. General objectives

a) Announced

The announced objective of CENAPEC is contained in its name : the promotion of cooperative enterprises. This it does mainly by education and training of members of cooperatives. Since most of the cooperatives (actually 914 cooperatives are enroled with the CENAPEC) are agricultural, it is needless to insist on the fact that much weight

...

is given not only to increased agricultural production but also to increased and better commercialization of products. Official objectives have not been shifting. The objectives of the CENAPEC are conform to declared national policy priorities ; the fact that CENAPEC is a governmen institution speaks for itself.

b) Apparent

By the nature of CENAPEC announced objectives cannot be different from apparent ones. CENAPEC is in itself not a cooperative. It promotes cooperatives which in themselves are private institutions and can be formed by any group of people if they meet up the requirements.

2. Terms of loan

a) Purpose

We shal talk of only one type of loan in this paper : "crédit de commercialisation" accorded to cooperatives to enable them sell at better conditions. It is given by the B.N.D.A. after consultation with the CENAPEC.

b) Period

It is generally a short-term credit that is seasonal. It is given at the beginning of the harvest season especially for coffee and cocoa and repaid at the end of it (6 to 8 months).

C - Organization

1. General structure

The head office of the CENAPEC is at Bingerville near Abidjan. There are three main divisions in this office :

a) Promotion Division :

Does field work and caps the five action zones.

b) Education Division :

Does education and training of cooperaters, employees, leaders, civil servants and cooperation agents at the center in Bingerville and in the action zones.

c) Study and applied research division :

Does particular research in economy and management, financing and credit, organisation and structures.

2. Local Structure

CENAPEC has five action zones with offices at Abidjan, Bouaké, Korhogo, Divo and Man. Each zonal office has a manager and some assistants. They are close to the cooperatives.

D - Beneficiaries

1. Selection Criteria

There are two major conditions for obtaining commercialization credits from the B. N. D. A. :

a) The solliciters of credit must be a cooperative.

b) The cooperative must be legally constituted and enroled by the CENAPEC.

To receive the credit, the social capital of the cooperative must be deposited with the B.N.D.A. and blocked throughout the credit period. The cooperative must also sign a contract with an import-export house engaging itself to sell its product to the house. To understand why, this is necessary, we must understand the main reason for this sort of credit. There are three stages in the commercialization process of industrial agricultural products in the Ivory Coast. There is what we call the "collecte" i.e. the assembling of products at specific points called "points de collecte". Then there is the "transportation and conditionnement" of these products. Thirdly the exportation. It is the "collecte" that is important to the small farmers and it is for this that the B.N.D.A. gives commercialization credits to cooperatives of small farmers.

The price of most of the major agricultural products is fixed at the beginning of the season by the "Caisse de Stabilisation". Coffee for instance is 105 francs CFA per kilogram in the plantation and 112 francs

at the "point de collecte". Ordinarily agents (Libanese, Dioulas, etc..) buy from the farmers in the plantations at 105 francs and sell to export houses at 112 francs. One of the aims of the credit is to enable the cooperatives sell directly to the export houses thereby gaining the extra 7 francs on each kilo.

When the cooperative which is asking for credit signs a contrat with an export house engaging itself to sell all its products to the house, the export house engages itself to pay in the premium of 7 francs on each kilo to the B.N.D.A. That is to say instead of paying 112 francs for each kilo to the coopérative, it pays 105 francs to the cooperative and 7 francs to the B.N.D.A. This premium is held by the bank as a guarantee and given back to the cooperative when it repays the credit given to it.

Normally the amount of credit is in function of the average production of each member of the cooperative.

2. Graduation Policy

Successful borrowers are asked less formalities for future borrowings and can get more credits.

3. Number and Types

This credit was started in 1970. In 1970-1971 season.the B.N.D.A. gave credits to the tune of 41,000.000 CFA/francs and in 1971-1972 the credit amounted to 64 807 000 CFA francs.

Helpful information does not exist on breakdown by crop. However the credits in question are generally for coffee and cocoa.

4. Other Sources of Credit

It is obvious that the credits given the B.N.D.A. do. not suffise and farmers have had to borrow from traditional lenders. It is impossible to give statistics on traditional credits. All that can be said is that they are very important till now.

5. Profile of Farm Community

The cooperatives are among people of the same village in general. The members know themselves well. The cooperatives are generally of small farmers. ~~Cooperatives are generally of small farmers.~~ Cooperatives of big farmers do exist. But the CENAPEC and the B.N.D.A. are to all appearances more interested in small farmer cooperatives or at least they want to promote them. Generally therefore the cooperatives we are talking about in this paper are cooperatives of small farmers. Because the CENAPEC and the B.N.D.A. are interested in them, they can easily get credits.

E - Lending Policies and Procedures

1. Portfolio

The amount given by the B.N.D.A. for the two seasons has been given under D. Generally a cooperative is given a loan in a season. There are no restriction to the value of loans to a cooperative. However successf cooperatives which have been borrowing in the past have bigger value than new ones.

2. Interest Rates

The interest has been 6 %. If a cooperative is borrowing for the first time the 6 % is calculated at fixed commission i.e. on the period of the loan which is generally six to 8 months. For subsequent borrowings it is 6 % per annum.

Inflation is no problem. In any case the amount of the loan is still so small that the question is not even posed.

There is no way of estimating the real cost of credit to borrowers. This credit is only a small part of the activities of the B.N.D.A. and is mixed up with these other activities.

3. Collateral

4. Other subsidy

...

F - COLLECTION

1. Repayment record

There has been no case of failure in repayment till now. It has happened that one or two cooperatives repaid with two or three months of latenc This was mainly due to the fact that part of the credit was used to buy equipment instead of its being consecrated wholely on commercialization.

2. Methods

The B N D A has agencies throughout the country and repayment is made to these agencies in cash.

3. Special enforcement procedures

There are no extraordinary measures. However failure to repay -an there is no example of this till now- may mean not obtaining credits from th B N D A again. The fact that the credit is to a group means that group solic rity exists and therefore group sanctions do exist.

4. Rescheduling

The credit is repaid and if the cooperative is in need of new cred a new credit is made to it.

G - COSTS AND FINANCE

1. Portfolio profit and losses

There is no erosion due to non payment and inflation. Generally a loan is made for between 6 and 8 months. It is the cooperative rather than tl B N D A that can turn the loan. It can do this seven times before maturity.

2. Administrative costs

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Information not available.

3. Beneficiary savings

It is certain that the cooperative has to have its own finance and that the credit given by the bank is just to complete it. Besides the premium on each kilo paid to the B N D A by the export house on behalf of a cooperative is compulsory saving and this premium goes into millions of francs at times. When this money is given back to the cooperative, it may decide to share it out amongst its members, retain it for financing the next season, or invest it in social services (dispensary, schools, wells, etc.), or buy agricultural equipments with it. Whichever way it goes there is a spirit of savings that is evident and members of cooperatives seem quite receptive.

The cooperatives which are for the commercialization of coffee and cocoa are village development cooperatives and much of the profit is for saving and investing.

The CENAPEC found out that these cooperatives (not all of them have B N D A's credit) commercialized in 1971-1972 25,390 tons of coffee and 28,328 tons of cocoa making a turn-over of [illegible] 365 000 CFA francs and making a monetary increase of 317 359 346 CFA francs. Of this 317 359 346 francs 168 000 000 F was saved.

4. External finance

A paper on the B N D A has already talked about this. How the CENAPEC is financed is already explained in the introduction.

For the commercialization credit given by the B N D A, the Central Bank offers full rediscount and it does seem that the B N D A uses this facility extensively.

5. Institutional solvency

Full information is not available.

6. Foreign exchange balance

Most of the agricultural cooperatives enroled with the CENAPEC are dealing with agricultural products that are exported. In 1969-1970, the coffee

and cocoa cooperatives commercialized 6.602 tons, in 1970-1971 : 18 714 tons and in 1971-1972 53 713 tons. All these are exported and they increase the country's foreign. reserv.

H - COMPLEMENTARY FACTORS

1. Technology

a) Directing, Tying and Packaging.

The credit we are discussing in this paper is for commercialization i. e. from the harvest to the time the product is sold to an export house at a "point de collecte". The credit is wholy in cash.

b) Program Extension and Supervision.

As mentioned earlier CENAPEC gives training on credit and portfolio management to cooperatives. It supervises the accounts books of these cooperatives to see that money is well used. It visits beneficiaries both as individuals and as groups. It has been able to post some of its members permanently in different zones and it has been possible in some cases for these people to help the cooperatives more extensively (harvesting, weighing, drying of products and contacting export houses).

c) Other arrangement for technical transfer:CENAPEC is in good working relationship with other organisms and no doubt gets these to see to some other technical problems of cooperatives (good varieties for instance).

Besides, CENAPEC is part of the ministry of agriculture and no doubt coordinates its work with the other departments of the ministry.

d) Nature of technology

For the commercialization in question there is not much technology involved. The "Caisse de stabilisation" has marked collection points all over the country and each village is not far from a collection point. All that the cooperative does is to arrange for its product to be brought to one of these points. The only thing that can make this difficult is lack of finance and this is where the credit plays a major role. The CENAPEC extension agents associated

with the program see to it that cooperatives find good export houses so as to sell at good price and the members are instructed on the art of weighing and selecting.

2. Supplies and sales

a) Program supplies

This does not enter the present discussion

b) Program infrastructure

The program itself does not include construction of feeder roads, irrigation works etc. It does however include storage facilities for a very short period before sale.

It is moreover certain that the benefits of cooperatives are reinvested in clearing roads and other things.

c) General access and availability

Cooperatives still sell their products without the help of CENAPEC. However CENAPEC helps them to contact good export houses and to sell under better conditions and to be able to know when they are being cheated.

d) Guaranteed sales and price supports

For the principal agricultural products like cocoa and coffee, there is guaranteed market for products that meet the specifications as regards quality and quantity. We have explained that where producers can not afford to carry their products to collection points, commercial intermidiaries go to buy from them in the plantations but that means a difference in price. Cooperatives in general are able to sell directly to export houses thereby gaining what would have gone to commercial intermidiaries.

There is a guaranteed price. Actually a kilogram of good quality coffee is 112 francs at the collection point and 105 franco in the plantation.

e) Insurance

None to our knowledge

f) Other program marketing arrangements

The producers are offered organised market and guaranteed price. See (d) above.

g) General marketing conditions

For the principal products there is no limited access to market if producers present products of the right quality. The production of cocoa and coffee has always been on the increase in this country and when one considers that over 90 % of these plantations belong to Ivorian farmers, it can be rightly said that increased output has not been a major problem, at least on producer level.

The government may like to favor increase in the production of cocoa instead of coffee. It does this by means other than limiting access to market of coffee producers.

h) Profits and risks

The minimum price of cocoa, coffee, rice etc is fixed in such a way that the producer has necessarily a profit margin. The interest asked by the bank is so low compared with the interest asked by traditional lenders. If the producer -and it looks like that- makes some profit with traditional loan, it is logical that his profit will still be higher with the bank loan. More detailed information does not seem to exist.

II EVALUATION

A. Performance

1. Apparent uses of credit

Generally the commercialization credit has been used for its intended purpose. There has been one or two instances where credit was used to finance equipement.

2. Effects

It is not possible to make a detailed breakdown of effects. All that can be said is that the credit has an impact on farm sales./Which avail themselves Cooperatives of this credit, and even those which do not yet, now insist on selling directly to export houses.

The direct sale to export houses, the better selection of quality have all increased the profit to ~~producers~~ farmers and there is no doubt whatsoever that distributive losses have been reduced.

It is probable that with the increase in profit the farmer has improved his choice of technology. The extent is difficult to say.

The saving discipline has had discernible impact on farmer savings habits. There is no statistics as to the extent except that given earlier in this paper.

The low interest rates charged by the B N D A do not discourage the flow of savings into farm finance. The B N D A's credit does not go a long way and has not even been able to reduce much of the traditional borrowing.

a) Employment

No information

b) Polical and social structure

There has been no noticeable effects on the political influence of the groups we are discussing. In any case they are not intended to have such influence.

3. Progress towards other objectives

Members of cooperatives are now seeing the good effects of cooperatives and are enthousiastic about them. The proof is that some of them no longer wait to be invited to Bingerville for seminars. They invite the CENAPEC for seminars in their area and gladly meet part of the costs.

4. Image

a) Farmer attitudes

The farmers are very keen about the loans. Demand has been on the increase and so is the amount of loan.

b) General image of program

The B N D A is quite happy with the way this program has worked and intends to increase it.

B. Evaluation procedures and feed back

1. Program evaluation procedures

There isn't any. The borrower is just expected to pay back at the end of the period. CENAPEC offers management guarantee but this is more of a promise that does not commit CENAPEC.

2. Feed back and changes in program

There has been no modification in procedures. The credit was started two years ago. The B N D A feels it is a very good success and wants to increase it.

C. Problems

1. Government level

The only problem really seems to be that CENAPEC worked alone at its beginning. But this was normal because it was necessary to see its viability under fairly difficult conditions. The government now considers it as helpful institution and there will probably be a reorganization very soon at last to give CENAPEC a legal status and possibly some measure of autonomy.

2. Agency level

The problem is on staff level. The work of CENAPEC is specialized and it is not just anybody can do it. However CENAPEC has been receiving peace corps volunteers from some countries (America, Germany, Holland...) and these come at times with their vehicles which is an important help.

3. Farm level

There does not appear to be any problem here.

D - Conclusions about small farmer credit

1. Major problems of small farmers

The major problem of small farmers in this country is mainly economic. One has even to make a distinction between the North and the South. Whereas in the South monetary revenu from agriculture is fairly high, it is low in the North because of poor productivity by hectare and more difficult climatic conditions.

2. Role of credit in meeting this problem

Credit will surely help to buy agricultural equipments and do other things like checking erosion. There are a few cases where people are not quickly responsive to new agricultural methods but this is not a problem that can be solved by credit. There is a service "animation rurale" that tackles this.

3. Credit and new technology

a) Triggering small farmer development

There is no doubt that much institutional credit is needed especially in the North to move to an improved level of technology. This can be hindered if farmers borrow from local lenders at exorbitant interest rates. Obviously the CENAPEC is achieving a lot by instructing farmers on how to achieve big objectives by putting their ressources together.

b) Susteining small farmer development

Lack of institutional credit can be a limiting factor but much is being done to reduce this handicap.

4. Conditions for success or failure

The program of CENAPEC has been a success and more continues to be done to sustain it. The credit of the B N D A is also a success and there are serious plans to increase it.

5. How could the program be improved

We do not see any way for the mean time. The program of CENAPEC is still a young one and it is too early to see what major improvement should be recommended.

III - Role of technical assistance

A. A. I. D. Imputs

As far as we know the only assitance of the A. I. D. is to supply some members of the Peace Corps. There are five at present and work in the zonal offices visiting groups and helping them in the manner described earlier in this paper.

B. Other Donor Imputs

The U N D P and I L O participate in the costs and finance of CENAPEC. ILO supplies some experts and its appears that the U N D P meets as much as 50 % of the working costs .

Some countries like Germany and Holland also send volunteers.

C. Effects

No doubt the technical assistance was indispensible in getting the program going. It is clear that assistants were well conversant with local conditions or were at least well instructed on their arrival ; so there is no transfer of technology poorly suited to local conditions.

D. Recommendation

The CENAPEC is doing a very important work. Nobody is ignorant of the importance of developing the rural world and this is what CENAPEC is doing. The U N D P is coming to the end of its second phase of the contract and may refuse to accept a third phase. It is necessary that some other organizations should help. Even if the U N D P continues to stay, there are so many ways in which foreign donors can help, for instance the buildings of the CENAPEC are getting very very old and are not even sufficient.

Sources of data and other references

1. Plan quinquennal de développement économique, social et culturel 1971-1975 (Ministère du Plan, République de Côte-d'Ivoire)

2. Rapport du Directeur du C E N A P E C au comité consultatif de coordination du 25 novembre 1969.

3. Organisation coopérative par C E N A P E C (15 octobre 1970)

4. Trois années d'action coopérative pour le groupage CAFE-CACAO par C E N A P E C (1972)

5. Rapports de la Banque Nationale pour le Développement Agricole (B N D A).

COUNTRY STUDY

INSTITUTIONAL CREDIT FOR SMALLHOLDER FARMERS: A CASE STUDY OF THE WESTERN NIGERIA AGRICULTURAL CREDIT CORPORATION (WNACC)

by:
A. Ijose: N.I.S.E.R. University of Ibadan abd J.N. Abaelu: University of Ife

Ibadan and Ile-Ife
December, 1972

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by

A. Ijose, N.I.S.E.R., University of Ibadan, Nigeria.

and

J.N. Abaelu, Department of Agricultural Economics, University of Ife, Ile-Ife, Nigeria.

INTRODUCTION

Low per capita income is a well-known characteristic of the underdeveloped regions of the world. In the Western State of Nigeria per capita income is estimated to be less than £40 per annum. Given such a low level of income, the ability of the individual to save towards an increased level of consumption in the future is greatly limited. This is particularly true of the agricultural segment of the population. Among the farm group per capita income is considerably less than the State average, implying an even more limited capacity to save.

Agricultural production is constrained in the Western State by lack of financial capital. Cocoa farmers need funds to purchase spraying equipment and to pay for the substantial costs they incur on weeding and harvesting labour. Food farmers, also need working capital to purchase planting seeds and hire labour for major seasonal tasks. Because their personal savings are so limited, farmers commonly borrow to finance their production, and often-times consumption, expenditures.

Private lenders constitute the most significant sources of farm credit. These include personal relatives, merchants, professional money lenders, cooperative and thrift societies. A recent credit survey of the Western State indicates considerable variation in the extent of farmers' use of these private credit sources. Of the 612 farmers interviewed by Ijose(1) in 1971, 8.2 per cent obtained credit from Cooperative

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* All figures and other basic information used in the preparation of this paper were collected by the senior author for the purpose of another study.

(1) Abiodun Ijose, Preliminary Report on the Administration of Agricultural Development Programmes (1968-1971) in Western Nigeria.

societies, 5 per cent from money lenders, 7.7 per cent from relatives, 0.9 per cent from commercial banks and 31.3 per cent from own savings. Almost 44 per cent of farmers interviewed met their credit needs by deferring payment to labourers until crops were harvested and sold at the end of the production year. Although the survey did not observe the rates of interest charged, these are known to be high and to vary considerably among credit sources.

The high cost of borrowing from private suppliers of farm credit has long been a major concern in official circles. The Nigerian Local Development Board (1946-1949) was in fact partly an attempt by the Colonial government to set up a public agency that would broaden the base of agricultural credit in Nigeria and provide badly needed countervailing power against the activities of private money lenders. With the advent of regional governments in 1949 the Western Region Development Board (WRDB) assumed responsibility for farm credit in the then Western Nigeria. In the six-year span of its existence, the WRDB granted a loan of £18,728 for agricultural projects, or about 3.4 per cent of its total lending operations.(2) In the absence of an inspection system to oversee the actual use of the loans, much of the money was diverted to non-agricultural enterprises. The WRDB was dissolved in 1955 and responsibility for farm credit vested in the Western Region Finance Corporation (WRFC). This body immediately took steps, to enlarge the area of its operation in the region by setting up 209 local loans boards. By 1962 it had granted £1.7 million for agricultural projects, or about 34 per cent of its total loan disbursement. The number of farmers benefitting from these loans was 90,185, giving an average loan of £19.5 per farmer.(3) Table 1 gives a breakdown of these loans by category of use. As can be seen, about 57 per cent of the total loans issued were for cocoa production (ie. purchase of spraying equipment and field cultivations). Next in order of importance was food crop production followed by fishing. Column 6 of Table 1 gives some indication of loan repayment performance by type of use. At best one can say that repayment performance was generally poor irrespective of the use to which loans were put. This poor repayment performance cannot simply be attributed to profit or administrative factors, if only because political considerations were known to weigh heavily in the granting of loans to individuals during this period.

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(2) Akinwolemiwa, J.O., "The Value of Supervised Credit in the Western Nigeria Agricultural Credit Corporation" (Text of a lecture to the Western Nigeria Public Service Forum, February, 1965)

(3) Oluwasanmi, H.A. and Alao, J.A., Bulletin of Rural Economics and Sociology, Vol. 1, No. 1, p. 67.

Table 1

Agricultural Loans Issued by the Local Loans Boards of the Western Region Finance Corporation, 1956-1963

1 Category of Loan	2 No. of Borrowers	3 Loan Issued (£)	4 Principal in Default (£)	5 Interest in Default (£)	6 Principal in default as a % of Loan Issued
Food crops	51,724	678,702	281,268	184,811	41.4
Spraying Equipment	29,295	673,742	347,595	247,150	52.2
Cocoa Cultivation	5,320	328,567	263	92,492	.08
Special Farming	547	19,949	7,803	3,106	39.01
Fishing	3,299	56,243	30,552	20,677	54.3
TOTAL	90,185	£1,757,203	£667,481	£548,236	

Source: Western Region Finance Corporation, Annual Reports, 1955/56 - 1962/63.

Table 2 indicates that almost 90 per cent went to small borrowers of less than £40. But, despite the sizeable volume of lending for agriculture, the much desired change in farm practices was no where in sight. Once again, a high proportion of loans, ostensibly for agricultural projects, had gone into commercial and other ventures - petty trading, purchase of transp rt vehicles, construction of residential buildings, etc. In addition the incidence of default was very high, necessitating continual recourse to budgetary appropriation to support the lending operations. The WRFC thus came under severe criticism for failing to adopt an approach that would quickly lead to its financial independence from the treasury.

These several concerns led to a further reform of the agricultural credit institution in 1964 when the Western Nigeria Agricultural Credit Corporation (WNACC) was established. The main novel features of the new organization were: (a) loans were granted on the basis of a farm plan and financial budget prepared by a qualified extension official of the Department of Agriculture in collaboration with the farmer/loan applicant, (b) abandonment of the condition stipulating adequate collateral in favour of prospective repayment capacity as the criterion for lending to farmers, (c) supervision and technical guidance to ensure implementation of the approved farm plan, (d) granting of loans to small-scale farmers (less than 5 acres) through their cooperative societies.

Though yet another reorganization occurred in 1971, the only important new element was the unification of government agricultural and industrial credit agencies under the Western State Agricultural and Industrial Credit Corporation (WNACC). For this reason this paper will concentrate on its predecessor, the Western Nigeria Agricultural Credit Corporation (WNACC).

This brief historical survey indicates the chequered course of the development of the public agricultural credit institution in the Western State of Nigeria. Although the role and importance of the public credit agency has increased over the years, private suppliers still dominate the small-holder credit environment. Private credit sources, from the farmers' point of view, have the advantages of being quicker, more personal and informal. The public credit institution charges relatively very low interest rates but this advantage seems greatly whittled by the formal, impersonal, and complex processes to the benefit of political favourites.

OBJECTIVE AND SCOPE OF STUDY

The primary objective of this study is to describe the organizational structure and the methods of operation of the WNACC. Also, it is intended to assess WNACC's effectiveness or efficiency in meeting the credit needs of smallholder farmers.

Table 2

Size Distribution of Loans Made by Twenty-Two of the Local Loans Boards in Western Nigeria, 1957-1961

Size of Loans	Number of Borrowers	Percentage of Total Borrowers in Each Size Group
£20 and less	2,434	57.7
£21 - £40	1,355	31.6
£41 - £60	191	4.5
£61 - £80	145	3.4
£81 - £100	118	2.8
	4,223	100.0

Source: Western Region Finance Corporation, Annual Reports 1955/56 - 1962/63.

The concept of smallholder farmer employed in this study encompasses a wider spectrum of farmers than the State government's definition. We include in our definition the two groups officially classified as small-scale farmers (1-4 acres) and medium-scale farmers (5-25 acres). It should be stressed however that WNACC could grant loans to farmers on holdings of less than 5 acres only if they belonged to and were sponsored by a recognized Cooperative society.

WESTERN NIGERIA AGRICULTURAL CREDIT CORPORATION (WNACC)

ORGANISATION AND STRUCTURE

The WNACC was required by law to establish five major departments as follows:

(a) Loan making and Servicing
(b) General Administration
(c) Accounts
(d) Internal Audit
(e) Information and Training.

The Corporation was also required to establish 3 Circle Agricultural Credit Offices, each under a Circle Agricultural Credit Officer. The three Agricultural Credit Circles established were Abeokuta, Ibadan, and Akure. The Circle Credit officer's job included the training of members of the Local Credit Advisory Committee and supervision of the Assistant Credit Officers in charge of smaller Credit Offices within the Circle.

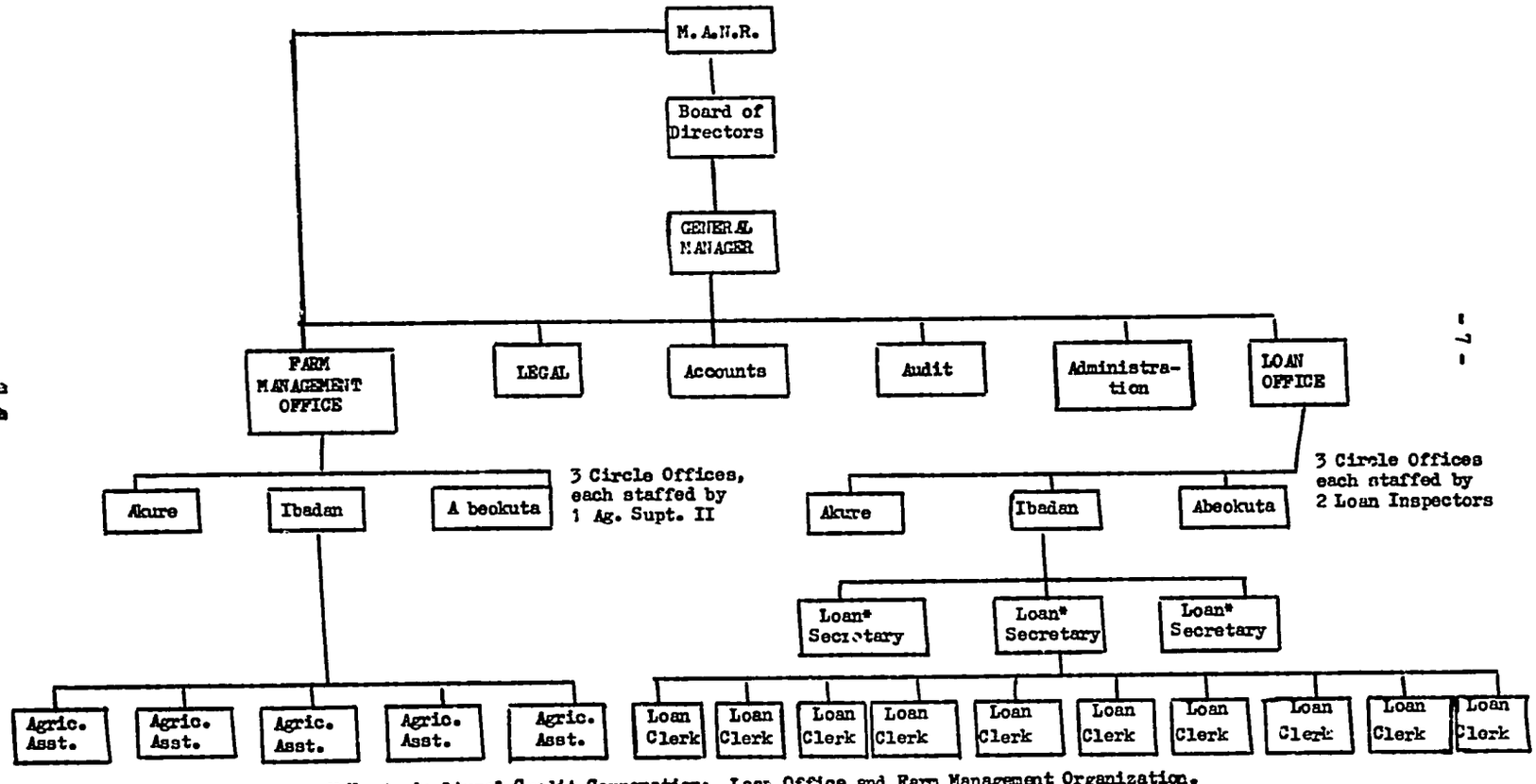
Figure 1 shows the organisational structure of the WNACC. The General Manager, as the chief executive, was responsible for public relations, contact with government universities and other external agencies and negotiation of financial loans to the corporations. These responsibilities would appear to leave the general manager with little time to devote to administration and coordination of the corporation's loan operations. The failure of the corporation to appoint a deputy general manager to perform these duties was an unfortunate error. One consequence of this was that the service units of the corporation (legal, accounts, audit, etc.) attained equal status with the principal unit (loans and service department). Ideally, the deputy general manager ought to be Chief Loans Officer and the heads of the various service units should be responsible to him.

DUTIES OF MAJOR FUNCTIONARIES

(a) Board of Directors: This consisted of a Chairman and eight other members three of whom were: (i) an officer of the Agricultural Extension Services Division of the Ministry of Agriculture of or above the rank of an Assistant Chief Agricultural Extension Services Officer; (ii) an officer of the Cooperative Societies Division of the Ministry of Trade and Industry

FIGURE I

Organisation Structure of WNACC



Source: W.N. Agricultural Credit Corporation: Loan Office and Farm Management Organization.

of or above the rank of a Principal Assistant Registrar of Cooperative Societies: (iii) an officer of the Treasury Department of or above the rank of a Senior Assistant Secretary.

The General Manager and Secretary was responsible for executing the policies and decisions of the Corporation's Board of Governor. A Deputy General Manager, responsible to the General Manager, was to coordinate and supervise the functions of all major departments of the Corporation but this position was never filled.

The organisation structure and functions described above were not significantly different from those of earlier credit institutions in the Region. While it is desirable to examine and correct organisational weaknesses that could hinder the effective operation of the new credit institution, other major problems which it shared with its prodecessors centred on finance and susceptibility to manipulation by political bosses. Interference by powerful politicians in the loan activities of the Corporation caused misallocation of its loan resources.

The outbreak of Civil War in 1967 disrupted the operation of the WNACC. But even so major strides continued to be made as can be seen in Table 3. This table also shows that roughly one-half of the total loan issue of £400,784 went to individual medium and large-scale farmers. Most of the remaining amount went to small-scale farmers through their Cooperative Societies. Unfortunately, information is not available that will permit the breakdown of these loans by type of use. Such a breakdown would have given some picture of the profit expectation attached to various enterprise by the corporation.

CRITERIA FOR APPROVING LOANS:

The official instrument establishing the WNACC in 1963 stipulated maximum return as the goal of its loan operations.(4) It is therefore necessary to be clear as to what this injunction really means if we are to properly evaluate the basis on which loans were decided by the WNACC.

Clearly, WNACC was not intended to be a vehicle for extending "soft" loans to poor farmers. Maximization of returns requires careful search for lending opportunities which promise the greatest possible profit. It also requires the disbursement of the available loan funds among alternative uses until returns are equated at the margin. Of course, the pursuit of this principle could further aggravate any existing income inequality within agriculture, but this is a matter outside the terms of reference of the Credit Corporation.

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(4) Western Nigeria Agricultural Credit Corporation, 'Manual on Supervised Agricultural Credit, page 11.

Table 3

Breakdown of Loans Approved by Type of Borrower, 1964-71

	Number of Loans Approved								Amount of Loans Approved				
	Individual Loans	Group Loans					Total Number	Total Farm Families Assisted	Individual Loans	Group Loans			Total Loans
		Cooperative Societies	Unions	Companies	No.	No. of Farm Families			£	Cooperative Societies £	Unions £	Companies £	
1964/65	-	-	-	-	-	-	-	-	-	-	-	-	-
1965/66	17	775	1	-	776	23,250	793	23,267	2,982	154,855	20,000	-	177,837
1966/67	329	5	-	-	5	150	334	479	38,934	2,838	-	-	41,772
1967/68	25	-	-	-		-	25	25	5,154	-	-	-	5,154
1968/69	114	1	-	-	1	30	115	144	13,735	250	-	-	13,985
1969/70	325	-	-	1	1	3	326	328	35,152	-	-	5,640	40,792
1970/71	735	8	1	1	10	513	745	1,248	98,804	1,787	18,790	863	121,244
Total	1,545	789	2	2	793	23,946	2,338	25,491	194,761	160,730	38,790	6,503	400,784
1971 April and May	405	-	-	-	-	-	405	405	39,055	-	-	-	-

Source: WHACC Annual Reports 1964/65 to 1970/71.

Though the profitability criterion was a close directive, it was not clear in the government instruction from whose point of view profit was to be maximized. Was it to be maximized from the viewpoint of the farmer-borrower, the corporation itself, or both? These are not necessarily coincident, and a careful formulation of credit policy ought to have made clear which one of these should form the basis for maximizing loan profits.

In actual practice, loan awards were decided not on the basis of the highest expected rates of economic return but rather on the basis of simple farm budget demonstration of the likelihood of a surplus over costs. The major crops for which loans were advanced were cocoa, rice, maize, and kenaf. Table 4 shows the five most profitable crops in each of the three major agricultural zones in the State. In the central belt the Corporation did not give loans for sweet orange and yam. In the Northern savannah zone loans were not given for tobacco and rice. In the Southern Rain Forest Belt, loans were not made for cassava and kolanut. Part of the explanations of the Corporation for not financing the development of most of these crops was based on poor marketing system of the products. While this is not wholly its problem, the Corporation would do well to bring pressure to bear on the government on the need for integrated approach to the development of agriculture in the State.

Debt Repayments

Table 5 shows the debt collections made by WNACC from 1964-71. Out of a total £400,784 loaned out during this period almost £196,772 was collected, representing 49 per cent. While this is an improvement over the record of the WNFC, the total outstanding debt was still very high. Loans to individuals during the period totalled £194,761. Of this amount repayments was nearly £70,679 or 36 per cent.

This high incidence of default raises a number of questions concerning: (i) the economic criterion used in the granting of loans, (ii) the accuracy with which farm plans and budgets which form the cornerstone of the supervised credit programme are prepared, (iii) the timing of debt collection, (iv) farmers' attitude to repayment of debts to government agencies. In addition, repayment performance would be much better if the Corporation had been involved in the marketing of the crops for which it made loans. In this circumstance it would be relatively easy to deduct debts to the corporation from the revenue derived from the sale of produce.

Table 4

Five Most Profitable Crops in each of the three major agricultural Zones of the W. State of Nigeria

		Returns to Management per acre of crop		
		Existing Traditional Management System	Improved Management System	
A.	Central Cocoa Belt			
1.	Cocoa (mature)	£7.73	£31.44	new seed variety
2.	Sweet Orange	£10.33	£26.12	
3.	Yam	£11.62	£25.62	
4.	Rice	£ 0.28	£23.07 £13.92	part. mech. manual
5.	Cassava	£-2.61	£13.53	
B.	Northern Savanna Zone			
1.	Tobacco	-	£21.70	
2.	Rice	£0.98	£19.07 £12.13	part. mech. manual
3.	Cocoa	£8.80	£13.88	
4.	Sweet Orange	£6.08	£10.39	
5.	Yam	£3.76	£10.06	
C.	Southern Rain Forest Belt			
1.	Cassava	£4.46	£21.07	
2.	Kolanut	£-5.20	£19.86	
3.	Cocoa (mature)	£ 3.66	£16.57	
4.	Rice	£-2.97	£16.41 £ 5.45	partially mech. manual
5.	Yam	£ 1.53	£11.34	

Source: Production, Production Requirements, Costs and Returns of Crops (Agricultural Resource Situations: A, B, and C) Western State of Nigeria; Agric. Project Planning and Marketing Division, M. A.N.R., Ibadan 1972.

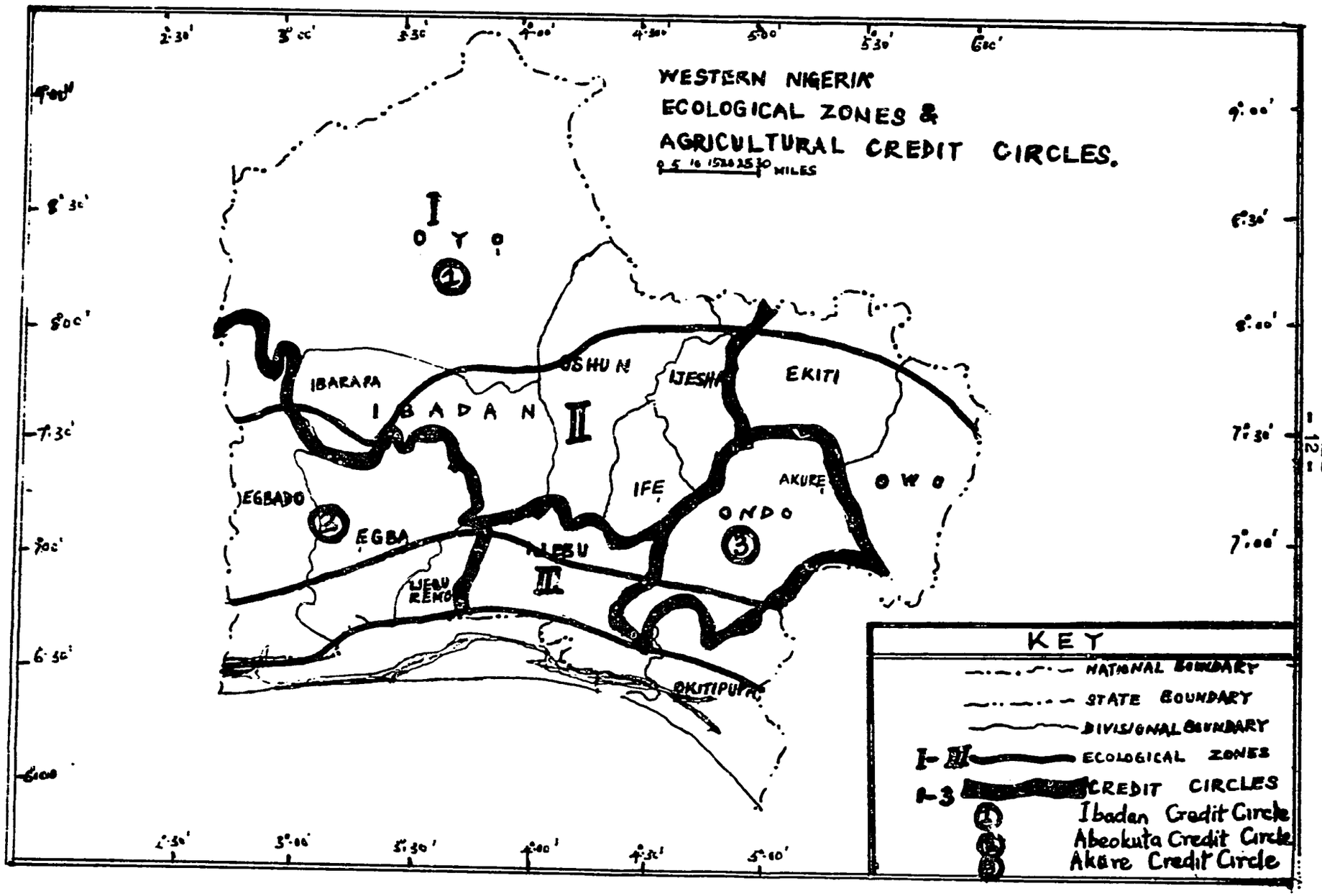
WESTERN NIGERIA
ECOLOGICAL ZONES &
AGRICULTURAL CREDIT CIRCLES.
0 5 10 15 20 25 30 MILES
I
OYO
IBARAPA
IBADAN
II
OSHUN
IJESHA
EKITI
EGBADO
EGBA
IFE
AKURE
ONDO
OWO
IJEBU REMO
IJEBU
III
OKITIPUPA
KEY
NATIONAL BOUNDARY
STATE BOUNDARY
DIVISIONAL BOUNDARY
I-III ECOLOGICAL ZONES
1-3 CREDIT CIRCLES
1 Ibadan Credit Circle
2 Abeokuta Credit Circle
3 Akure Credit Circle

TABLE 5

Loan Issues and Repayments Under the Supervised Credit Scheme 1964-1971*

YEARS	INDIVIDUALS		COOPERATIVES		UNIONS/COMPANIES	
	LOANS	REPAYMENTS	LOANS	REPAYMENTS	LOANS	REPAYMENTS
1964/65	-	-	-	-	-	-
1965/66	2,982	-	154,855	-	20,000	-
1966/67	38,934	6,255	2,838	56,198	-	15,804
1967/68	5,154	11,169	-	32,088	-	1,646
1968/69	13,735	6,381	250	6,817	-	3,162
1969/70	35,152	10,146	-	484	5,640	1,110
1970/71	98,804	36,727	1,787	3,044	19,653	1,383
TOTAL	194,761	70,679	160,730	102,988	45,293	23,105
Repayments as percentages of Loans		36%		64%		51%

* It has been impossible to separate principal from interest because of lack of information.

Source: WNACC Annual Reports 1964/65 to 1970/71.

The record of loan repayment by Cooperative societies and Unions was far better than that of individuals. Repayment was about 64 per cent of the amount loaned.in the case of Cooperatives and 51 per cent for Unions and Companies. Though this still cannot be considered as very high, it, nevertheless, suggests the desirability of encouraging lending through cooperative organizations.

One of the important issues related to repayment performance is the timing of collection. From February to April, smallholer farmers plant their food crops. From May to August, they tend the crops; from August to November they harvest them. With regard to loans for foodcrop production, the best time of the year to collect repayments is obviously August to November. However, it is important to examine whether borrowers have other pressing farm activities, say cocoa harvesting, for which they would require funds. Cocoa harvesting usually involves heavy outlays on labour. While this expenditure occurs between September and November, the sale of cocoa beans is generally between November and February and even then farmers may not receive payments upon sale. It would thus appear desirable that the timing of repayment on loans for food crops should be different for farmers who grow both food crops and cocoa. For this group of farmers repayment of loan may be more easily made in the period November through February. On the other hand, for farmers who grow only food crops loan repayment can be timed for August through October.

The release of loans to farmers also needs better timing. If loans for food crops are not released between March and May they will not meet the needs of farmers. Loans for cocoa are best released between June and October for planting, weeding, spraying and harvesting. In the survey by Ijose(5) 66 per cent of the 650 farmers randomly selected and interviewed on this problem complained seriously about untimely release of loans. This factor appeared to have a serious adverse effect on their attitude towards borrowing from the WNACC.

Security of Loans

As indicated already, one of the main features of the corporation's supervised credit scheme was the fact that loans were to be approved on the basis of prospective repayment capacity. Possession of a suitable collateral or security was deemphasized. Did this change actually result in a major reduction in the incidence of loan default. Available evidence does not appear to support judgement in the affirmative. The observed loan repayment rates were: (i) cooperative societies 64 per cent, (ii) individual farmers 36 per cent, and (iii) Unions and Group Loans 51 per cent.

(5) Ijose, A., Preliminary Report on the Administration of Agricultural Development Programmes (1968-1971) in Western Nigeria.

These results, once again, call into question the adequacy of the criterion for loan approval. This criterion needs to be strengthened and should discriminate more in favour of projects with demonstrably high rates of economic return. To this also must be added better timing of repayment schedule, and increased education of farmers to overcome deeply held beliefs that debts owed to government are not expected to be repaid.

Cost of Loan Operations:

The costs of the corporation's loan operation consist of the following:

(a) Administrative Costs - personal emoluments, capital costs (e.g. building, transportation), and overheads like office equipment, stationeries, etc.

(b) Interest charges on funds borrowed from the government, the commercial banks, or any other source.

(c) Losses or unrecoverable debts.

WNACC obtained its funds exclusively from government with no interest charge. For the purpose of correctly establishing the true cost of loan operation, however, an interest charge ought to be imputed on the funds borrowed from government. Failure to consider the opportunity cost of borrowing from government could quite likely create a disposition towards perpetual reliance on budgetary appropriations. An interest rate of 8 per cent, which reflects commercial bank charges on loans, has been used to derive the estimates in Table 5 (column 3).

Losses or unrecovered debts were, due to lack of information, impossible to calculate. Figures were available on debts outstanding but these could not be correctly regarded as unrecoverable.

Despite the difficulty of precisely calculating the total cost of the corporation's loan activities, the impression gained from the effort presented in Table 6 below supports the belief that the total cost must have been extremely high. As can be seen from Table 5, administrative costs alone exceeded the loans issued by the corporation for most years from 1965/66 to 1970/71.

Table 6

WNACC's Administrative Costs, 1964-1971

Year	1 Loan Issued £	2 Administrative Cost £	3 Imputed Annual Interest at 8% £	4 Total Administrative Cost plus Interest £
1964/65	-	503,490	-	503,490
1965/66	177,375	78,865	14,190	93,055
1966/67	32,140	84,783	2,571	87,356
1967/68	16,882	73,372	1,350	74,722
1968/69	11,195	77,250	896	78,146
1969/70	14,559	81,830	1,165	82,995
1970/71	65,976	107,390	5,278	112,668

Source: WNACC Annual Reports 1964/65 to 1970.

FARMERS' EVALUATION OF WNACC'S SERVICES

One of the major requirements for successful agricultural credit administration is a clear appreciation of the circumstances of the farmer. Care is needed in planning the size of loan, the procedures to be followed, timing of loan release and repayment, etc. if farmers are to derive maximum benefit from credit. Unless these matters are planned as much as possible to suit the convenience of farmers, dissatisfaction with the credit institution is bound to be considerable.

What was farmers' assessment of the services provided by the WNACC? Before and after the general election of 1959 politicians made farmers feel that a large amount of money was available for their needs; all that farmers had to do was ask for their shares and no one need have any fear about repayment. The attitude of mind thus engendered very adversely hindered the debt collection efforts of WNACC. It is significant in this context to note that, in spite of the poor repayment performance of farmers, a high proportion of them still gave government credit as their first preference from a set of credit sources presented

to them. Ijose[6] observed that 40.6 per cent of farmers prefer government credit, 33.6 per cent Cooperative, 3.19 per cent relatives, 2.6 per cent commercial banks, 0.3 per cent money lenders, and 19.8 per cent personal savings.

Farmers' opinion of the methods of operation of the agricultural credit corporation was generally poor. This stemmed, in the main, from the excessive red tape and the complexity of the numerous procedures involved. 86 per cent of the farmers reported they were unable to understand the procedures laid down by the Credit Corporation.[7] Timeliness in the release of approved loans also was a cause of complaint by farmers. This issue has been touched upon earlier. Evidence shows that most loan requests took from six months to two years to get through. Since planting activities are crowded into a period of three months, it is desirable to reorganise the structure of the Corporation in such a way as to use the Credit Circle as centres of responsibility for approving and payment of loans up to say £300. This may call for re-appraisal of the staff requirement of the Corporation, delegation of responsibility and commensurate authority, adoption of sound monitoring and financial information system, a strengthened internal audit and device which will concentrate not just on the normal internal audit but will scrutinise borrower's eligibility, security and arrangements and collection of repayments.

Further still, farmers felt that for greater effectiveness credit supply should be complemented with the supply of other essential productive inputs, namely, fertilisers, improved seeds, together with the training of farmers in their proper use.

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(6) & (7) Ijose, A., Preliminary Report on the Administration of Agricultural Development Programmes (1968-1971) in Western Nigeria.

SUMMARY AND CONCLUSION

Compared to other sources of farm credit, government is a relatively new supplier in the agricultural credit environment in the Western State of Nigeria. The development of a formal public institution for the extension of credit to farmers has by no means followed an easy, steady course. Between 1949 and 1972 four successive government institutions were set up in Western Nigeria to give credit to farmers. Though the one now in existence is the Western State Agricultural and Industrial Investment Corporation (WSAIIC), it has been in the field just about a year and judgement would be premature at this stage about its functional efficiency. This paper therefore concentrates on the WNACC which was in operation 1963 through 1971. Organisationally, the WSAIIC and the WNACC are similar. The difference lies in the fact that industrial lending was outside the scope of the activity of the WNACC.

A number of observations may be made on the administration of agricultural credit under the WNACC. First, the concentration of authority to approve loans at the head-office level was a cause of ineffectiveness. While the Circle Agricultural Credit officers could approve loans not exceeding £10, the bulk of the applications coming to them exceeded this amount and thus, had to be referred to the head office. This created more "red-tape" and delay and gave the farmer a complicated and frustrating picture of the government credit machinery. Many would-be borrowers were consequently turned away. It would have done much to expedite credit operations to have given authority to Circle Credit officers to approve larger loans, up to say £300. This view, of course, assumes that the accounting and audit departments of the Circle Office would be correspondingly strengthened and supported with an effective management information system.

Second, failure to appoint a deputy general manager for the Corporation seems to have largely contributed to inadequate coordination of activities and the information required for decision-making. Too much responsibility was heaped on the General Manager-Secretary.

Third, since the WNACC was given the injunction to aim at maximum return, it is surprising that little effort was made to relate loan awards more to universally accepted economic criteria for investment. Simple demonstration of excess return over cost is not a valid criterion for determining the most profitable outlets for loan funds. Choice of the best or most profitable outlet should be based on rates of return expected from alternative uses of farm loan.

Also, in this connection, government policy should have made clear from whose point of view profit is to be reckoned -- the farmer, the corporation, or both combined.

Fourth, the timing of the release of loans approved affects their usefulness to farmers. Reported delays of 6 to 24 months defeats the purpose of loan request by farmers.

Fifth, though loan repayment has not generally been impressive, it appears this could have been greatly improved by: (a) lending for the most profitable uses, (b) taking into account farmers' need for further loans to meet other farm activities, especially in a multi-crop situation, (c) promoting the formation of cooperative societies as media for channelling farm loans, (d) education to change attitudes towards repayment of debts owed to government institution.

Finally, there is need to consider measures for raising the volume of loan resources available to the credit corporation so as to permit raising the level of lending to individual borrowers. This will enable farmers meet more adequately the costs of various inputs - fertilisers, seedlings, labour -- which complement each other in the production process.

REFERENCES

1. Akinwolemiwa, J.O., "The Value of Supervised Credit in the Western Nigeria Agricultural Credit Corporation" (Text of a lecture to the Western Nigeria Public Service Forum, February, 1965).

2. Ijose, A., Preliminary Report on the Administration of Agricultural Development Programmes (1968-1971) in Western Nigeria.

3. Oluwasanmi, H.A., and Alao, J.A., Bulletin of Rural Economics and Sociology, Vol. 1, No. 1, p. 67.

4. Western Nigeria Agricultural Credit Corporation - Manual of Supervised Agricultural Credit.

OFFICIAL DOCUMENTS

1. Western Region Finance Corporation, Annual Reports 1955/56-1962/63.

2. Western Nigeria Agricultural Credit Corporation - Loan Office and Farm Management Organisation Chart.

3. Western Nigeria Agricultural Credit Corporation, Annual Reports 1964/65-70/71.

4. Production, Production Requirements, Costs and Returns to Crops (Agricultural Resource Situations A, B and C), Western State of Nigeria: Agricultural Project, Planning and Marketing Division, Ministry of Agriculture and Natural Resources, Ibadan, 1972.

COUNTRY STUDY

SMALL HOLDER AGRICULTURAL CREDIT IN EASTERN NIGERIA

AN ANALYSIS OF THE FUND FOR AGRICULTURAL AND INDUSTRIAL DEVELOPMENT

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by:
Sylvester Ugoh
Economic Development Institute
University of Nigeria

Enugu
December, 1972

SMALL HOLDER AGRICULTURAL CREDIT IN EASTERN NIGERIA: An Analysis of the Fund for Agricultural And Industrial Development 1/

The original plan of this study was to examine the various credit schemes for small holder farmers in Eastern Nigeria. But in the course of the study, it was found that data on most of the schemes would not be made available in the required time. There was no alternative to limiting the study to the Fund for Agricultural and Industrial Development (F.A.I.D.) scheme on which some data are readily available. This, however, was the most important government agricultural credit scheme in operation before the civil war. It has not resumed operation since the end of the civil war. Our study is therefore historical. It is our intention, within the limits of the data available, to study this scheme in some depth.

HISTORICAL BACKGROUND

The Fund for Agricultural and Industrial Development law was passed in April 1963. The objective of the scheme was to provide a source of credit, in addition to existing commercial institutions, for the acceleration of agricultural and industrial development of the Eastern Region of Nigeria. In the First National Development Plan, 1962-68, an allocation of $2.8 million[2] was made to provide credit to small holder farmers who were adjudged unable to borrow from "existing commercial institutions" because these institutions considered them too risky and therefore credit unworthy. Moreover, the small holder farmers account for most of the farming population in the Region and so credit to them would have a broad effect. An amount of $1.4 million was also allocated for credit to small industrial entrepreneurs during the same period.

1/ By Dr. Sylvester Ugoh, Economic Development Institute, University of Nigeria. The author acknowledges his immense indebtedness to Mr. E. C. Ekwonu who provided most of the data used in this study.

2/ The exchange rate used is U.S. $2.80 = £N.

Although U.S. $4.20 million was allocated in the plan for F.A.I.D., only $1,960,000 was appropriated for the fiscal years 1963/64 and 1966/67. These appropriations were as follows:

1963/64	$560,000
1964/65	280,000
1965/66	280,000
1966/67	840,000
	$1,960,000

But in addition to these appropriations, other funds were available to F.A.I.D. if it needed them. These were made by the following:

(a) The Development Finance (E.N.) Ltd., ...	$ 140,000
(b) Barclays Bank (Overseas)..	280,000
(c) The Ford Foundation of America	140,000
	$ 560,000

Although none of these offers was taken advantage of, it would nonetheless be correct to state that F.A.I.D. had available to it $2.5 million to draw on during the years 1963/64 to 1966/67.

F.A.I.D. was interested in both agricultural and industrial credit. But our concern in this paper is agricultural credit. We have therefore to focus our attention on the agricultural credit activities of F.A.I.D. From the National Development Plan allocations, we see that $2.80 million was allocated for agricultural credit while $1.40 million was for industrial credit. It would appear safe to assume therefore that the Government's intention was that the ratio of F.A.I.D.'s credit would be 2:1 between agriculture and industry. From this assumption, the proportion of the fund actually available to F.A.I.D. which should have been directed to agricultural credit is $1.68 million.

Out of this amount, only $464,472 was issued as loan for agricultural activities between 1963 and May 1967. These were broken down as follows:

Tree crops and plantations ..	$219,548
Food crops, Poultry/Piggery farming	151,785
Agricultural industries	93,139
	$464,472

Agricultural industries included oil mills, rice mills, kapok processing and nut cracking. Although 280 loans aggregating $861,000 were approved in the period, only 267 valued at $464,470 were actually issued or granted. Realising that $1.68 million was available for lending, and that only about $464,500 was lent out, it follows that only 28% of the fund available was actually loaned out to farmers by F.A.I.D.

ORGANIZATION AND PROCEDURE

To appreciate why F.A.I.D.'s rate of utilization of available resources was very low, one has to look into its organization and procedure for the granting of loans. The F.A.I.D. law set up a Committee of Permanent Secretaries to administer the Fund. The Chairman was to be appointed by the Premier from the Public Service. The Chairman acted as the General Manager and was assisted by a Secretary-Accountant. All these were attempts to insulate the F.A.I.D. from political influence which had been held responsible for the earlier failure of the Eastern Nigeria Development Corporation agricultural credit scheme. F.A.I.D. was to be under the cabinet office, and all its disbursements of funds were to be subject to Treasury control. As a part of the civil service apparatus, its staff were released from other Government Departments and were liable to transfer to other Departments at short notice. For its activities, it had to work through existing Government machinery. For instance, its legal documents were prepared by the Ministry of Justice, its payments made through the Sub-Treasuries, indents placed to the Crown Agents through the Accountant General.

Loan applicants had to complete very cumbersome and complicated forms. It is argued that the low rate of response by potential borrowers was partly due to the cumbersomeness of the forms. As at December 1966, of the 2,972 application forms sent to applicants, only 1,421, or 48%, were completed and returned to F.A.I.D. In addition, loan applicants had to be recommended by the local Divisional Officers coupled with guarantees and other investigations done by F.A.I.D. But since F.A.I.D. had no technical staff of its own to investigate these loan applications, it depended on the staff of the Supervised Agricultural Credit Branch of the Ministry of Agriculture, the Divisional Officers and the Registrar of Co-operatives. These staff were relatively few in number and were burdened with other duties. They formed a major bottleneck in the processing of loan applications. The table below shows the ratio of referred applications processed by the various organizations:

Processing of Loan Applications as at 31/1/67

	Divisional Officers	Registrary of Cooperatives	Ministry of Agriculture
A. Applications received by F.A.I.D. Office, accepted for processing and sent processing to:	921	63	923

B. Reports on above received by 31/1/67	541	45	364
'B' as a percentage of 'A'	59	70	39

From the Table, it can be seen that the Ministry of Agriculture constituted the greatest bottleneck in the processing of loan applications. And yet they were the technical arm of F.A.I.D. in its agricultural credit programme.

LENDING POLICIES:

F.A.I.D. had the power to grant short term as well as medium- and long-term loans. But short-term loans were not to be granted to individuals. The main reason for this is that short term loans were used mostly for the production of annual crops like rice, yams, cassava etc., and F.A.I.D. was barred from making loans to individuals for the production of annual crops.

But short term loans could be made to registered cooperative societies, village communities or other like institutions. The cooperative society or village community could then re-lend the proceeds of its short-term loan to its members. However, a ceiling on the amount a member could receive through his cooperative society for annual crops was placed at $1,400 and this was repayable within two years.

But loans could be granted to individuals for perennial crops such as palm tree plantation or rehabilitation, cocoa, rubber, for livestock development, and for the processing of agricultural produce. These were invariably medium-term loans which would not be repaid until after four to five years, depending on the particular project. Medium-term loans were granted instalmentally. After the first instalment was granted, each subsequent instalmental loan was made after the beneficiary had satisfied F.A.I.D. Committee that the previous instalments had been well used.

F.A.I.D. had a ceiling for the amount of loans granted to the different categories of borrowers. The ceiling was geared to the resources of the various categories. The maximum amount loanable to the different categories of borrowers was as follows:

Individuals	$2,800
Partnerships	7,000
Cooperative Societies, Private Limited Companies and Village Communities	14,000
Public Limited Companies	28,000

For loans to be granted, not only was the project to be adjudged commercially viable by F.A.I.D. but also, the applicant was required to provide some guarantor or a collateral in the form of land and/or buildings. Both the

guarantor and the collateral had to be acceptable to F.A.I.D. It has been estimated that about 55% of all applications submitted to F.A.I.D. were rejected. The reasons for rejection included lack of acceptable collaterals, unviable projects, or projects outside the statutory requirements. However, the most important single reason for rejection was lack of adequate and acceptable security and/or surety.

F.A.I.D. charged 5% interest on loans to individuals and 8% on loans to cooperative societies even when such cooperative societies relent to their members the proceeds of such loans. The interest rate charge was low compared to what the commercial banks charged. These rates did not reflect changes in prices nor the high cost of administering the programme. This could be considered a direct government subsidy to the beneficiaries of the programme.

The credit was tied, in some cases, to other inputs and, in other cases, to a new technology or organization. Fertilizers, new varieties of seeds or seedlings, animal feed or a new breed of animals formed the major inputs which were to be supplied by the Ministry of Agriculture through its own schemes. In the case of new technology and organization, oil presses, tree crop plantations and cooperative organizations were encouraged through the use of these credits as inducements.

The civil war disrupted the activities of F.A.I.D. and the creation of States has made it a responsibility of the Eastern States Interim Assets and Liabilities Agency (E.S.I.A.L.A.). As such it is difficult to assess its repayment record. However, as of 30th of May, 1967, $26,190, in principal and interest had been repaid out of the total loan of $464,470. Unfortunately, the records do not show what proportion of the $26,190 is the principal. It has been stated that there were a few cases of defaults, and that the most recurrent reason for the few defaults was the failure of the beneficiaries to obtain on schedule, supplies of fertilizers or other necessary inputs from the Ministry of Agriculture.

EVALUATION OF THE PROGRAMME:

As already stated, F.A.I.D. operated for so short a period that it is difficult to appraise its performance. For instance, not much can be said about its debt collection, its success or failure with regard to the rate of defaults. However, in spite of its short history, one can pass some judgment on some aspects of the programme.

F.A.I.D. had some sort of an evaluative system built into its procedure for granting medium-term loans. As already stated, medium term loans were granted instalmentally. After the first instalmental loan was granted, each subsequent one was made after the beneficiary had satisfied the Committee that the previous instalments had been usefully applied. In this way, there was an evaluation of the way the earlier loan proceeds had been utilized. But this evaluative system was not built into the other types of loans.

In spite of the limited scope of the built-in evaluative system, there were hardly any cases of beneficiaries applying the loan to purposes other than those for which it was granted. The main reason for this was that the bulk of the loans proceeds was disbursed in kind, in the form of agricultural inputs, rather than in cash.

No data are available which could be used as a firm basis for judgments on the impact of the F.A.I.D. programme on the output or income of the farmers. It is pretty clear that the few farmers who got the loansdid increase their output. But the number of the beneficiaries in relation to the size of the farming population was so small that its impact on the farming population in general was infinitesimal.

The farmers' opinion of F.A.I.D. was not high. They thought that the credit programme was no improvement on the banks. The strict requirement on securities was no different from that of the commercial banks. The long delays in processing applications could not have endeared the programme to the farmers or the general public. There was a public criticism of the F.A.I.D. activities on the floor of the Eastern Regional House of Assembly early in 1965. The Parliamentarians expressed the view that the programme had failed to achieve its objectives. Unfortunately, there were no visible changes in procedure or policies following these criticism. It is difficult to know whether such changes that might have followed these criticisms were aborted by the political crisis that engulfed the country later that year.

PROBLEMS OF F.A.I.D.

The problems of F.A.I.D. can be categorized into two broad groups: (a) Organizational and Administrative, and (b) Loan policies.

The intention to insulate F.A.I.D. from unhealthy political influence was commendable. But in trying to devise an administrative arrangement that would shield F.A.I.D. from undue political influence, sight was lost of the main objective of F.A.I.D. which was to facilitate credit to the farmers. It never occurred to the Government that the cramping effect of making F.A.I.D. a part and parcel of the civil service machinery would be to ensure that only a small portion of funds available would reach the farmers. Usually, a successful civil servant is one who can muster ten good reasons why no action should be taken on a matter.

The governing body of F.A.I.D. was made of Permanent Secretaries. They hardly ever attended the meetings themselves. Instead, they sent junior officials to represent them. This created two related problems. Such junior officials did not have sufficient authority to make definitive decisions at such meetings which meant that matters had to be referred back to the Permanent Secretaries for guidance and later decisions. But more importantly, the fact that different officials were present at different meetings meant that valuable time was often wasted trying to explain to new members

decisions that had been reached earlier. Both problems slowed down considerably the work of F.A.I.D.

The procedure of relying on the existing civil service machinery for operations meant that work had to go at the civil service pace. The usual civil service red tape was observed and the lack of any sense of urgency meant interminable delays in actions.

In spite of the fact that F.A.I.D. operated as an arm of the civil service, we find that there was very ppor coordination between its work and that of the Ministry of Agriculture. Some of the loans were made with the understanding that the Ministry of Agriculture would supply some inputs to the beneficiaries. The profitability of the projects had been calculated on the assumption that these inputs would be supplied as planned. But quite often the Ministry of Agriculture failed to supply on schedule the agreed inputs. This had the effect of upsetting the production plan, and of course, the profitability estimates of the projects.

The greatest weakness in F.A.I.D. was, I think, in its staffing position. To start with, F.A.I.D. did not attain its full strength of staff until September, 1964, eighteen months after its establishment by law. Furthermore, as the staff were civil servants who were liable to transfer to any Department at short notice, there was lack of continuity of staff. Expertise could hardly be developed from long experience on the job and no espirit de corps could be built up among the staff.

For any agricultural credit programme to be successfully run, it would require a staff with technical competence in both agriculture and credit. But in the case of F.A.I.D., the staff had competence in neither area. It had to depend completely on the services of the staff of the Supervised Agriculture Credit Branch of the Ministry of Agriculture. These staff already had a full plate of work in their own Ministry and could hardly be expected to give adequate attention to the work of F.A.I.D. The result of this was that investigation of applications was very slow.

The Loan policies of F.A.I.D. were guided by one over-riding objective: to reduce the rate of defaults. The cumbersome and highly sophisticated application forms which prospective beneficiaries were expected to complete were designed to spotlight easily those who would likely default. Also, the strict insistence on securities and guarantors was to ensure that if a beneficiary defaulted, F.A.I.D. could resort to the sale of his securities or his guarantors to repay the loan.

Much as one would accept the principle that the credit should be repaid, the chances of repayment are increased if, in fact, the credit leads to increased output. In other words, if a credit institution helps a loan beneficiary to increase his output then he has the wherewithall to repay

the loan. In the case of F.A.I.D., it would appear that once they got an acceptable security, they did not care whether their credit led to an increase in the beneficiary's output or not. Since they did not have their own extension or field workers, they could not ensure that the beneficiary was using the most up-to-date methods in his production. Furthermore, since it was the Ministry of Agriculture that made available the required agricultural inputs to the loan beneficiaries, F.A.I.D. could not guarantee that those vital inputs would reach the farmers in the right quantity and at the right time. Yet if these inputs did not reach the farmer at the right time, his chances of default are increased due to no fault of his.

A PROGRAMME OF ACTION

Credit is so important for the development of agriculture in the Eastern States of Nigeria that some thought has to be given to the solution of the problems that made F.A.I.D. ineffective. In other words, an organizational structure and administrative arrangement have to be devised which would insulate the credit organization from undue and unhealthy political influence and at the same time save it from the cataleptic effects of the civil service.

Also, some system has to be devised to make the credit facilities available to a larger number of small farmers without increasing unreasonably the incidence of defaults. I have pointed out that the strict requirement of securities in the Eastern Nigerian context will limit drastically the number of small farmers who can benefit from credit facilities. There are no individual titles to land in most villages, and even where there are such individual titles, these are not registered, and hardly have clearly demarcated and generally accepted boundaries. In such a situation, what will a farmer give as a security?

In the Eastern Nigeria situation, no private commercial credit institution can deal with the small farmer credit problem. Most of the farmers operate only on small scale. The administrative cost of making credits available to them is so high that no private credit institution can absorb such a cost and still continue in business. Only a government sponsored institution which will have to be subsidised by the government can tackle the problem effectively. But there are areas in which the commercial or private credit institutions could profitably cooperate with a government sponsored credit institution. I shall outline this later in this paper.

Accepting the hypothesis that the type of Credit Institution we have in mind can only be sponsored by a Government, the next question is, how should it be organised? It is my view that such an institution must be removed from the aegis of the civil service. It should be governed by a Board of Directors who should be responsible for policy. It should have

a General Manager who should be responsible for day to day administration. It should have its own staff appointed by and responsible to it. The staff should be a composite group with competence in various fields - banking, economics, agriculture, sociology etc. They should be able to evaluate projects. The experts in agriculture, sociology, and extension service should be able and ready to advise a loan recipient on the technical problems related to the project for which the loan is granted. In this way, credit and modern technology are extended to the beneficiary in one package.

This is the broad outline of the administrative structure. But whether the administrative structure works depends on the personalities appointed to the Board and to the General Managership and the support which the Head of the Government gives to the Board. If men of integrity, courage, and experience are appointed to the Board, and also, a competent and experienced person appointed as the General Manager, this administrative structure has a good chance of succeeding provided the Head of Government is prepared to support the reasonable decisions and actions of the Board and management against the onslaught of some civil servants who would like to meddle in the affairs of the institution, and some politicians who would like to use their corrupting influence to divert the attention of the Board from its objectives. If the wrong people are chosen for these jobs or the Head of Government fails to protect them when they need such protection against the two forces mentioned, the organizational structure I have suggested has no chance of surviving.

But even if the recommended conditions on the organizational structure and the character of the principal actors in the organization are met, there is still the problem of making the credit facilities available to a larger number of farmers without increasing the chances of defaults. To solve this problem, we have to steer clear of credit policies developed in the industrialised countries under conditions which do not exist in our own country. In its place, we should substitute policies and procedures that are anchored on our social systems and ethics.

In this respect, we should recognize that there is a credit organization already in existence in the villages. This is generally called "Esusu". This is prevalent in many parts of the former Eastern Region. Periodically, either weekly or monthly, a group of people make contributions of an agreed sum of money all of which is given to a member of the group. Next time, the same amount is contributed by the same group and is given to another member. This continues until every member of the group has in turn received in one lump all he has been contributing. If there were several cases of default especially among those who received the lump sum early in the cycle, this system of rural credit would have broken down. The fact that it has continued and grown over the years is indicative of the fact that the incidence of default has been negligible.

On the other hand, when the same member of an 'esusu' organization who would never default on his 'esusu' contribution receives credit from a governmental or para-statal institution, he may, more likely than not, default on the credit. How can one explain the apparent inconsistency or contradiction in the behavior of the person?

One important reason why the incidence on default in "esusu" organization is low is that the people know themselves well. Any doubtful character is not admitted into the organization. It is in the screening that the potential defaulters are eliminated. There is a second explanation for the low rate of defaulters: the people are afraid of censure from other members. A defaulter would be stigmatised for ever and would lose all his respect among the villagers. He would hardly ever afterwards be trusted or admitted into any respectable organization in the village.

In the case of credit from the government or para-statal institution, there is not that intimate knowledge between the credit official and the farmer. More often than not reputation is mistaken for character. The system of screening based on intimate knowledge is lacking, and as a result, potential defaulters who gained reputation through political activities are given credit on the basis of their reputation and political contacts rather than character.

There is a second reason why the rate of default on credit from Government agencies is high. The fear of group censure is absent. Many people look at the Government as a distant impersonal institution. They do not consider themselves as part of the Government. They look up to the Government the way many European and North American children look out for Father Christmas. They are anxious to receive their share of the "National Cake" which the Government is supposed to bake, store and distribute. When a farmer gets a credit from a government agency, if he defaults on it, the same people who would have censured him if he had defaulted on the "esusu" organization may, in fact, praise him for bringing into the village a share of the National Cake.

It follows from the above that to reduce the incidence of default on governmental credit, the leaders of the various communities have to be made to appreciate that the Government includes every person. They have to be educated to understand that the Government gets its money from the people and so whoever cheats the Government is only cheating the people.

Once the opinion leaders in the villages, the same people who have run successfully these "esusu" organizations, appreciate this fact and accept it, agricultural credit should then be made to communities or villages instead of to individuals. If credit is made to communities for them to

re-lend to their members, they would know those among them who have no character and who, therefore, would most likely default. If, furthermore, some incentive is built into a credit to a community, the community would be more motivated to meet the terms of the credit. The type of incentive I have in mind is an expression of readiness to lend a larger amount to the community if the present loan is paid on time and the people achieve the targets for which the loan was made in the first place. In other words, therefore, to qualify for the larger loan, the community would endeavor to meet the agreed targets and pay off the first loan. Any of its members who showed any signs of defaulting would be greatly censured for trying to let down the community. And if any did, in fact default, the community would make up for the defaulter in order to maintain its credit worthness.

In making credit to the community, security should not therefore be so important once the community leaders are proven men of character. In fact the risk in a loan to a community is smaller than that in a loan to the same people individually. As such the interest chargeable on a loan to a community should be lower than that chargeable on loans to individuals. In the case of F.A.I.D. for instance, we notice that the interest on loans to individuals was lower than that on loans to cooperative societies or communities. One can hardly see the logic in that. As it has been pointed out that the strict requirement for security by credit institutions disqualifies many farmers who otherwise would have benefited from the credit facilities, credit through communities would therefore be an easy way of avoiding this requirement without increasing unreasonably the risk of default.

There is even another important reason why credit to communities is preferable to credit to individuals. Farming in most areas of the Eastern States is on a small scale. If credit is to be given to individuals, there would be a large number to deal with, and the cost of administration would be prohibitive. With communities, the number of credits would be fewer and this would reduce administrative cost.

To ensure that there is not a misplaced confidence, the people should be allowed to select their own leaders. These leaders should not be imposed on them by the Government or the credit institution. Once the leaders are selected, their character should be thoroughly investigated and their influence over their people also assessed. If they are qualified on these two counts, the risk of default is greatly reduced.

From the history of F.A.I.D., we have learnt that the Ministry of Agriculture cannot be relied on to deliver to beneficiaries the required inputs at the right time or in the required quantity. The few cases of defaults in the F.A.I.D. programme were due to the necessary inputs not reaching the beneficiaries in time. To reduce the rate of defaults in the future, it will be necessary to find a solution to this problem.

One solution that readily suggests itself is to bypass the Ministry. But who should take the responsibility of making available to beneficiaries the inputs they require?

In this regard, there should be no problem in finding substitute channels in the State. There are many graduates in the various fields of agriculture who by training can take up the agency of distributing such inputs to the farmers. In the case of agricultural machinery, there are graduates in agricultural engineering or mechanization who, with the assistance of some good mechanics, can distribute and service such equipment.

But they do not have the capital which such distributive agencies would require. This is where the Para-statal Credit Agency can cooperate with the commercial banks. The Para-statal Credit Agency should screen such prospective distributors as to their technical competence, character and industriousness. Any of the young graduates that pass the screening should then be recommended to the commercial banks for the necessary working capital to carry the required stock.

Since the number of such distributors would be few, the Credit Institution would inform them when a loan is granted to any community. Such information should contain the types and quantities of inputs which the community would require, that is, the types and quantities the Credit Institution had accepted to finance. To ensure that the beneficiary does not use the loan for purposes other than those for which it is granted, no cash will be paid to it. Instead a chit specifying the amount of money receivable should be given to the beneficiary. This chit should be surrendered to the distributor once he has supplied inputs equivalent in value to the amount on the chit. With this chit, the distributor can collect his money from the Credit Institution.

In conclusion, I would like to add that the Credit Institution should realize that without adequate storage facilities and a good distributive system, a community that benefits from the loan and increases its output of agricultural produce may still suffer from a decrease in income simply because of the poor prices reigning during the harvesting period. This makes it necessary that the scope of credit should be wide enough to include construction of storage facilities and for carrying some stock of produce from one season to another. If the problem of agriculture is seen not only as one of increasing output, but also, as one of improving storage and marketing, and if tackled in all these ramifications, then the programme has a good chance of success.

SPECIAL PAPER

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by:
Adeniyi Osuntogun
University of Ife

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AGRICULTURAL CREDIT STRATEGIES FOR NIGERIAN FARMERS

BY

ADENIYI OSUNTOGUN*

I. INTRODUCTION

Agriculture is the mainstay of the Nigerian economy. It is not only a major source of foreign exchange earnings but also it provides employment opportunities for about 70% of the country's labor force. The objectives of the nation's agricultural policy as contained in the current National Development Plan include the fact that there should be food supplies in adequate quantity and quality to keep pace with increased population and urbanization; the expansion of the production of export crops, with a view to increasing and further diversifying the country's foreign exchange earnings; the production of agricultural materials for extensive domestic manufacturing activities, especially in the field of agro-based industries; creation of rural employment opportunities to absorb more of the increasing labor force in the nation and minimizing the tendency for inadequate and inefficient use of human resources in the rural areas generally; and the evolving of appropriate institutional and administrative apparatus to facilitate a smooth integrated development of the agricultural potential of the country as a whole. (1)

In order to bring about the realization of the above objectives some vital problems and features which characterize the country's agriculture deserve immediate attention. These center on the traditional and mainly subsistence system of agriculture. Production techniques are poor and there are few applications of fertilizers and insecticides. [1/] The particular farming techniques used by a community determine the levels of farm output in that community and the improvement or complete overhauling of these techniques may be essential to a major revolution in agricultural production. This situation is very applicable to Nigeria's agricultural sector. Further changes in the country's agriculture will require basic changes in the traditional techniques and organization of production. The application of advanced technology implied in this transformation will call for considerable investment of capital and thus increase demands for credit.

The role of credit in the transformation of Nigerian Agriculture therefore becomes very evident. Credit is needed for the production system including the payment of wages of hired labor, purchase of fertilizer, improved seeds and other requisites. Also, there is need for credit to meet the cost of marketing.

*Lecturer in Agricultural Economics at the University of Ife, Ile-Ife, Nigeria

[1/] Other problems include poor infrastructural marketing and storage facilities.

Credit for Nigerian farmers has been available in one form or another for many decades but, in general, most of the schemes have not only failed to make the desired impact, in addition their operations have been both unsatisfactory and unsuccessful. In this paper, possible strategies for institutional procedures for the development of sound credit program in Nigeria are discussed against the background of problems that have been known to militate against the successful operation of various credit schemes in the country in the past. First, attention is focussed on an examination of the various agricultural credit programs; an attempt then follows to identify the significant socio-economic impediments. Finally, suggestions on possible strategies are outlined.

II. SOURCES OF AGRICULTURAL CREDIT IN NIGERIA

The major sources of farm credit for smallholders in Nigeria can be classified into two broad categories, viz. the institutional and the non-institutional sources of credit. The institutional sources include the government lending agencies and farmers' cooperatives, while the non-institutional sources consist of friends and relatives, money lenders, merchants and middlemen. The non-institutionalized informal sources constitute the major supplier of credit entering the rural sector in Nigeria. Hence we shall start the discussion with an outline of their operation.

The Non-Instituticnalized, Informal Sources of Farm Credit

a) Relatives and friends

The extension of credit by relatives and friends is part of the cultural heritage of the country whereby the relatively more prosperous help their less fortunate friends and relatives either through direct loan assistance or as guarantors. This category of source is characterized by the little emphasis that is placed on the character of the borrower as a condition of credit supply. In some cases repayment is not insisted upon.[2/] The implications of this on the successful operation of government credit agencies will be discussed later. The funds made available from this source is also generally small as a result of which most farmers depend to a greater extent on the merchant-money lenders.

b) Merchant-money lenders

These constitute the chief source of rural credit in Nigeria. They make loans both in cash and in kind and they provide other ancillary services to their debtors. This factor gives them an edge over the other sources of farm credit, in particular, the government agricultural credit institutions.

2/ This applies particularly to loans given by direct relatives.

Even though the merchant-money lenders provide the bulk of the credit-needs of the farmers, yet a number of shortcomings characterize their operation. These include the fact that the terms of the loans are often too hard on the producers and consequently result in deleterious effects on agricultural production and marketing.

Their methods of lending vary considerably. One type takes the form of the farmer accepting an advance from a buyer before the produce is harvested, in return that he will sell his crop through that buyer. The loan is usually repaid in produce at a predetermined price, which is often lower than that prevailing at harvest. Galletiti, Baldwin and Dina discovered these practices in the cocoa-producing areas of Western Nigeria. They reported that at Ilaro, four hundred weight of cocoa was at one time demanded in repayment of a loan of ten pounds (£10). At Igbogila, a produce buyer lent only two pounds ten shillings (£2:10/-) to a farmer on a promise that the latter would deliver one hundred weight of cocoa next season. At Ishara, in Ijebu-Remo district, produce buyers demanded repayment of one hundred weight of cocoa for loans varying between three and five pounds. Similar practices were reported in Ibadan, Ife, Ilesha and Ondo districts. With the price of cocoa in 1951/52 at eight pounds (£8) per hundred weight, the effective rates of interest worked out from between 200 to 320 per cent per annum. (2) 3/

Apart from borrowing on the strength of the forthcoming crop, a farmer may raise a loan by pledging his farm as security.(5) He may agree with the lender to a bond under the terms of which the usufruct of his land belongs to the lender until such time as it is considered to have yielded sufficient to cover both the principal of the loan and the interest. Sometimes, one third of the produce is regarded as interest, one third as repayment of principal, and the remaining third is given to the debtor. In most cases, the lender takes possession of the farm and reaps the crops, until the debt is liquidated. The crop of a low-yielding farm is sometimes regaded as a mere perquisite of the lender and the borrower is required to meet his obligations from other sources.

The incentive to careful cultivation and harvesting is frequently removed by the pledging of the usufruct of farms as security. There have been instances where farmers who pledged their land and crops lost them due to their inability to repay their loans. For instance,

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3/ This practice is not peculiar to Nigeria. Similar systems of forward selling are found in other developing countries. For details of the practice in Ghana and Iran, see References (3) and (4).

in 1962, the Government of Western Nigeria had to provide the farmers in Aiyedade District with a loan of twenty thousand pounds (£20,000) so as to redeem the cocoa farms which they had pledged as security for loans. (6)

c) Public agricultural credit institutions

It is because of the limitations of the non-institutional sources of farm credit that the Governments in Nigeria had to set up specialized institutions for the operation of rural credit. The efforts include the establishment of the Nigerian Local Development Boards which operated between 1946 and 1949; the Regional Local Development Boards which took over from the former; the Western Nigeria Finance Corporation which administered farm loans between 1955 and 1965; the Western Nigeria Agricultural Credit Corporation which took over all agricultural loan operations from the Western Nigeria Finance Corporation; the Mid-Western Nigeria Agricultural Credit Corporation which was established in 1964; and the fund for Agricultural and Industrial Development of the former Eastern Regional Government.

These schemes have been the subject of several studies (7, 8, 9, 10 and 11), hence we do not propose to review details of their operations here. However, it is important to note that most of them have not been successful. In this section, we aim at a discussion of some of the major causes of failure. Such an exercise is important not only from the point of view of the development of the existing institutions but also for guiding the establishment and operations of future public institutions.

One of the major reasons for the failure of most credit institutions in Nigeria is that they have complicated, cumbersome and time-consuming procedures which result in delays in approval and in loans not being made available when required. Issues of loans take weeks and months instead of days in most agricultural credit institutions. This is due primarily to over-centralization and dependence on Government Ministries for the investigation and processing of loan applications in some of the institutions. For instance, of the total loans of £145,148 that were approved for agricultural production by the fund for Agricultural and Industrial Development only £35,481 were issued even after three years of their approval. (8) Similar delays have been reported on the operations of other credit institutions. (7, 8 and 9)

Quite apart from the fact that most credit institutions follow excessively rigid and time-consuming procedures for processing loan applications, a number of other shortcomings ranging from bribery and corruption, political interference and favoritism, bar their successful operations. For instance, the Coker

Commission of Inquiry into the affairs of certain statutory corporations in Western Nigeria, reported that many so-called farming loans granted by the Local Loans Boards went to Board members, petty traders and others who were not farmers. In a few cases, loans were even applied for and granted to dead persons! (12) Oluwasanmi and Alao also reported that some farmers complained that they applied to the Local Loans Boards for farm loans without success in spite of the fact that they had spent between £10 and £15 in buying loan forms and in bribing members of the Boards. (7)

Another common problem faced by all agricultural credit institutions is the repayment problem. Most of them experience low rates of repayment. It is reported that the Northern Nigeria Development Corporation gradually reduced its loans to the primary agricultural sector and increased its loans activities in the manufacturing sector because it experienced a low rate of repayment in the farmer sector. (8) Also, the Western Nigeria Agricultural Credit Corporation reported low rates of return in its loans to small-scale farmers. In 1965, a total of £152,855 was made to small scale farmers through cooperative societies. Only £56,198 was repaid. Of the 447 unregistered cooperative societies which received loans, 299 were yet to be identified or traced back for the recovery of loans issued to them. (13)

Some of the major reasons for the generally low rates of repayment were the facts that most of the loans were made under political influence, some were made without any technical analysis of borrowers' farming operations, and even without clear-cut identification of borrowers as being farmers. Also, lack of effective follow-up on use of loans has resulted in the diversion of agricultural loans to other uses. 4/

Shortage of trained staff and poor office management are other major problems that hinder the successful operation of government agricultural credit institutions. Most of them lack trained staff as a result of which they depend on civil servants. As these are loaned out on secondment for a period of time there is usually lack of continuity of staff.

d) Producers' cooperatives

These constitute another source of rural credit in the country. The organizational procedure varies slightly from state to

4/ Other important reasons, particularly the attitude of borrowers, are discussed in Section III of this paper.

state. In the Northern and Mid-Western State, for example, where there are no cooperative banks, cooperative credit takes the form of government guaranteed overdrafts from commercial banks. 5/ The money is then distributed through the various secondary and primary societies to the farmer-members. In the Western and Eastern States, on the other hand, cooperative credit is mainly administered by the cooperative banks and channeled through the unions and primary societies to the individual farmers.

A characteristic feature of cooperative credit is that the bulk of it is used to finance marketing board controlled produce. In the Northern States, for instance, of the total sum of £5,256,441 that was issued between 1962/3 and 1964/5 almost 75% was meant for produce purchase advances. 6/ Similarly, in Western Nigeria, 98% of the total loans made by the Co-operative Bank between 1955/56 and 1965/66 was for produce marketing. (8) 7/

Compared with other institutional sources of farm credit the agricultural loan program administered by the cooperatives has been more successful. In relative terms, it reaches a greater number of small farmers than the other formal sources of farm credit. Oluwasanmi and Alao reported that of the 500 farmers interviewed in the course of their study, 200 indicated that they had received loans regularly within the past five years, mainly from cooperative societies. The amount of loans varied between £5 and £600 per farmer. Only 44 of the 200 farmers received loans from Local Loans Boards of the Western Region Finance Corporation. (7)

The cooperative credit scheme also achieves higher rates of loan repayments than most of the government credit institutions. 8/ For instance, during the period 1962/63 to 1964/65 the Northern Nigeria Co-operative Credit Scheme achieved loan repayments of 92%, 83% and 88% on produce purchase advances, and 82%, 75% and 64% on pre-season loans. Similarly, between the period 1955/56 and 1965/66, the Co-operative Bank Ltd. 9/ realized loan repayments of 100%, 90% and 72.7% on its produce advances, loans to credit unions and credit issued for cooperative development respectively. (8)

5/ In the Northern States the maximum guaranteed overdraft with the Barclays Bank was £2,500,000 up till 1966. In Mid-Western Nigeria, on the other hand, the arrangement was with the African Continental Bank for the sum of £200,000.

6/ £3,552,800 was made for produce advances while £1,703,641 was for pre-season loans.

7/ The total loans made amounted to £45,166,992 of which £44,436,165 was for produce marketing.

8/ Exceptions are the politically inspired cooperatives such as the unregistered societies that are discussed under public agricultural institutions.

9/ This is the new name assumed by the Co-operative Bank of Western Nigeria as from January 1971.

Cooperatives have also served as channels for government and commercial bank loans to the rural sector. Thus, the credit scheme of the Co-operative Division of the former Northern Nigeria was funded through a system of overdrafts from the Barclays Bank. The Co-operative Bank Ltd. also draws overdrafts from Barclays during peak marketing seasons. Similarly, the African Continental Bank finances the co-operative credit scheme in the Mid-Western State.

Even though cooperative credit schemes have been relatively successful yet a number of their limitations need to be emphasized. The first of these centers on their small coverage of the total farming population. After almost four decades of existence, the cooperatives still account for less than 5% of the agricultural population of the country. (14) Also, there have been several cases of fraud, theft and cheating, especially by the paid officials of many societies.10/ Some possible remedies to this are discussed in Section IV of this paper.

III. SOME SOCIO-ECONOMIC IMPEDIMENTS TO SUCCESSFUL OPERATION OF INSTITUTIONAL AGRICULTURAL CREDIT PROGRAMS IN NIGERIA

Apart from the specific causes of failure of various agricultural credit programs that are discussed in Section II above, there are other important socio-economic factors which are worth consideration for the development of new institutional procedures for agricultural credit. Some of these include the difference in attitude towards repayment obligations displayed towards government and non-government sources of credit; the natural aversion to risk by most peasant farmers and the community pressure on innovators who fail; the generally low propensity of individual farmers to cooperate as opposed to individual pursuit of objectives; and the land tenure problem.

There are differences in attitude with regards to repayment obligation towards government and non-government sources of credit. A typical Nigerian farmer considers his government as a member of his extended family. If he is in need of resources and if he obtains resources in the form of credit through one of the government institutions, the farmer thinks of the loan more as a gift and repayment is of little or no concern to him. This is in contrast to loans received from the merchant-moneylenders which are usually paid back either in cash or in kind depending on the terms of the agreement. Bauman and others reported that the two loan clerks whom they interviewed in Western Nigeria estimated that about 80% of their combined 2,000 borrowers considered their loan as a gift from their government and 20% realized that repayment was necessary. (8)

This attitude towards repayment obligations to government sources of credit is brought about not only by the culture and tradition of the Nigerian society

10/ For detailed discussion see the Annual Reports of the Registrars of Co-operative Societies.

but also it has been further encouraged by the politicians who often mislead the farmers in an attempt to catch votes. Chief Onagoruwa, the General Manager of Co-operative Bank Ltd. has remarked that there have been instances when farmers strolled into his office to say: "We have been told that money has been deposited with you for our benefit and we need to ask for it. Give it to us." (15) The two loan clerks interviewed by Bauman and others also stated that many of the loans in the 80% group were made under political influence which was a partial explanation of the high degree of loan defaults. (8)

Another behavioral science aspect of institutional impediments to the operation of credit programs is the natural aversion to risk demonstrated by most peasant farmers. There are traditional rigidities encouraging reluctance in the acceptance of new innovations. Among these is the community pressure on innovators who fail. A corollary of this is that most of the rural credit is utilized in consumption. Little is invested in capital improvements or even improved production practices.

The low propensity of individual farmers to join formal cooperatives as opposed to independent pursuit of objectives constitute another major impediment to the successful operation of various credit programs in Nigeria. As has been observed, cooperatives have served as channels for government and commercial bank loans to the rural sector. The effectiveness of their program has been limited by the low coverage of the cooperative movement. One of the possible explanations for this situation centers on the manner in which some government cooperative officials discharge their supervisory inspection and surveillance services to the cooperative movement. Some of them tend to assume police functions rather than development agents and this makes the farmers look on the cooperative as another form of government agency.

A major constraint upon agricultural credit is the communal system of land ownership which places authority over use and control of land in the hands of the community. Since land is inalienable except by consent of the descent group, it cannot serve as collateral for loan by a farmer. This means that institutional agricultural credit is limited mainly to the financing of the marketing of export produce. Peasant farmers have no acceptable security for obtaining loans for land acquisition and improvement.

IV. STRATEGIES FOR INSTITUTIONAL PROCEDURES FOR THE DEVELOPMENT OF SOUND CREDIT PROGRAM IN NIGERIA

In considering ways and means of improving the credit service to farmers a number of factors need to be taken into account. Among these is the fact that loan procedures must be simple and easy for the farmers to understand. The importance of timing should be realized. Decisions must be made on loan applications as quickly as possible, and loans must be disbursed on time and without excess time input by farmers. The repayment schedule also needs to be timely. It should be syncronized with the farming cycle of the borrower. Thus the repayment should not be fixed before the benefits from the investment are realized and should not be so long afterwards for fear that the farmers may deploy the funds elsewhere.

In order to make a success of loan schemes to farmers there is the need for technical assistance and supervision. This will bring about the necessary changes in production methods. Also, it is essential that any program of credit recognize the significant needs of the borrower. Although loans in the form of crop supplies will eliminate the possibility of misuse yet, this type of credit program will not wholly meet the needs of the peasant farmers. Hence, in addition, cash loans may be advanced for consumption and for meeting incidental expenses like the payment of hired labor.

Too often much emphasis has been on extending credit to farmers, with only very little recognition of the vital need to promote savings by small holders. There is a need for credit institutions to combine their present function with a program to promote savings. Not only will it serve as a source of additional funds for such institutions, it will also help to correct the wrong notion which farmers hold about institutional credit as a form of "free" money.

In order to overcome the problem of excessive administrative costs incurred in extending credit to small holders it is suggested that credit institutions should operate through genuine producers' cooperatives or other groupings of farmers. For this system to be effective, there will be need for a wider coverage of the farm population by the cooperative movement. This calls for a grass root approach to demonstrate the use of cooperatives. Also, it is essential to promote membership education and participation in the management of the societies in order to serve as a check on the excesses of the paid officials. The experiences of a very successful project operated by groups of tobacco farmers in the Western State with the guidance of Nigerian Tobacco Company highlights the importance of cooperatives as means of combining credit, production requisites and marketing. [11/]

Since the non-institutionalized, informal sources of credit have been known to be the major suppliers of rural credit, the writer suggests that we should experiment with utilizing some of them as means of extending and collecting production loans. For instance, the government credit institutions may make funds available to the farmers through the licensed buying agents and other produce buyers. Such credit should be advanced both on the past records of the licensed buying agents concerned and the hypothecation of their anticipated crop purchases. In order for the system to be successful there will be need for strict government control on use of loans and terms of lending to the farmers. A suggestion is that the rate of interest and the conditions of repayment should be given adequate publicity.

In conclusion, it should be emphasized that the success of any rural credit scheme is dependent upon other areas of rural development and can best function more effectively under their integrated approach to the problems of agricultural development. In general, the minimum inter-related requirements for a successful credit program must include a well organized agricultural extension service as well as adequate, effective marketing and supply arrangements.

[11/] For details on Tobacco Cooperatives see Reference (9).

REFERENCES

(1) Federal Republic of Nigeria Second National Development Plan 1970-74. Federal Government Printer, Lagos, 1970.

(2) Galletti, R.; Baldwin, K.D.S.; and Dina, I.O.; Nigerian Cocoa Farmers, An economic Survey of Yoruba Cocoa Farming Families. Oxford University Press, 1956.

(3) Report of the Commission on the Marketing of West African Cocoa. Cmd. 5845, 1938.

(4) Lodi, H.S.K., Preharvest Sales of Agricultural Produce in Iran. Monthly Bulletin of Agricultural Economics and Statistics. Vol. 14, No. 6, 1965.

(5) R. O. Adegboye: Processing Loans Through the Pledging of Cocoa Trees. Journal of the Geographical Association of Nigeria. Vol. 17, Dec. 1969.

(6) Akinwolemiwa, J. O.: The Value of Supervised Credit in the Western Nigeria Agricultural Credit Corporation. Lecture delivered to the Western Nigeria Public Service Forum, Ibadan, February, 1965.

(7) H. A. Oluwasanmi and J. A. Alao: The Role of Credit in the Transformation of Traditional Agriculture: The Nigerian Experience. Bulletin of Rural Economics and Sociology. Vol. 1, No. 1, 1964.

(8) H. Bauman, C. Connolly and J. Whitney; A Situation Report of Agricultural Credit in Nigeria. Consortium for the Study of Nigerian Rural Development - 3 June 1966.

(9) T. L. Jones, A. R. Gans, R. G. Hoover, R. P. Maxey, A. H. Stoneham and M. G. Smith; A Proposed Agricultural Credit Program for Nigeria. Consortium for the Development of Nigerian Rural Development - 4 Dec. 1966.

(10) A. F. Mabawonku: Public Sources of Credit in Agriculture: A Study of the Operation of the Western Nigeria Agricultural Credit Corporation. Unpublished report in part fulfillment for the B.Sc. (Honors) Agriculture, University of Ife, June 1969.

(11) O. Ogunrombi: A Study of the Operation of the Western Nigeria Agricultural Credit Corporation in Ibadan Division. Unpublished report in part fulfillment for the B.Sc. (Honors) Agriculture, University of Ife, June 1969.

(12) The Government of the Federal Republic of Nigeria: Proceedings of the Coker Commission of Inquiry into the Affairs of Certain Statutory Corporations in Western Nigeria, 1962.

(13) Second Annual Report of the Western Nigeria Agricultural Credit Corporation 1966-67. Western State of Nigeria Official Document No. 5 of 1968.

(14) C. Adeniyi Osuntogun: The Co-Operative Marketing of Agricultural Produce in the Western State of Nigeria, With Special Reference to Some Factors Influencing Members' Loyalty to Their Co-Operative Societies. Unpublished Ph.D. Thesis, University of Leeds, August 1971.

(15) G. A. Onagoruwa: Co-Operative Banking in Western Nigeria. Paper read at the Third International Conference in Africa on the Mobilization of Local Savings, I.C.F.T.U. Labour College, Kampala, Uganda; June, 1964.

COUNTRY PROGRAM

A REVIEW OF SMALL FARMER CREDIT IN GHANA: THE RICE AND MAIZE SCHEME OF THE AGRICULTURAL DEVELOPMENT BANK

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by:
Joseph B. Goodwin, USAID/Ghana and
Roger Selley, Harvard Development
Advisory Service

Accra
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Authors' Note

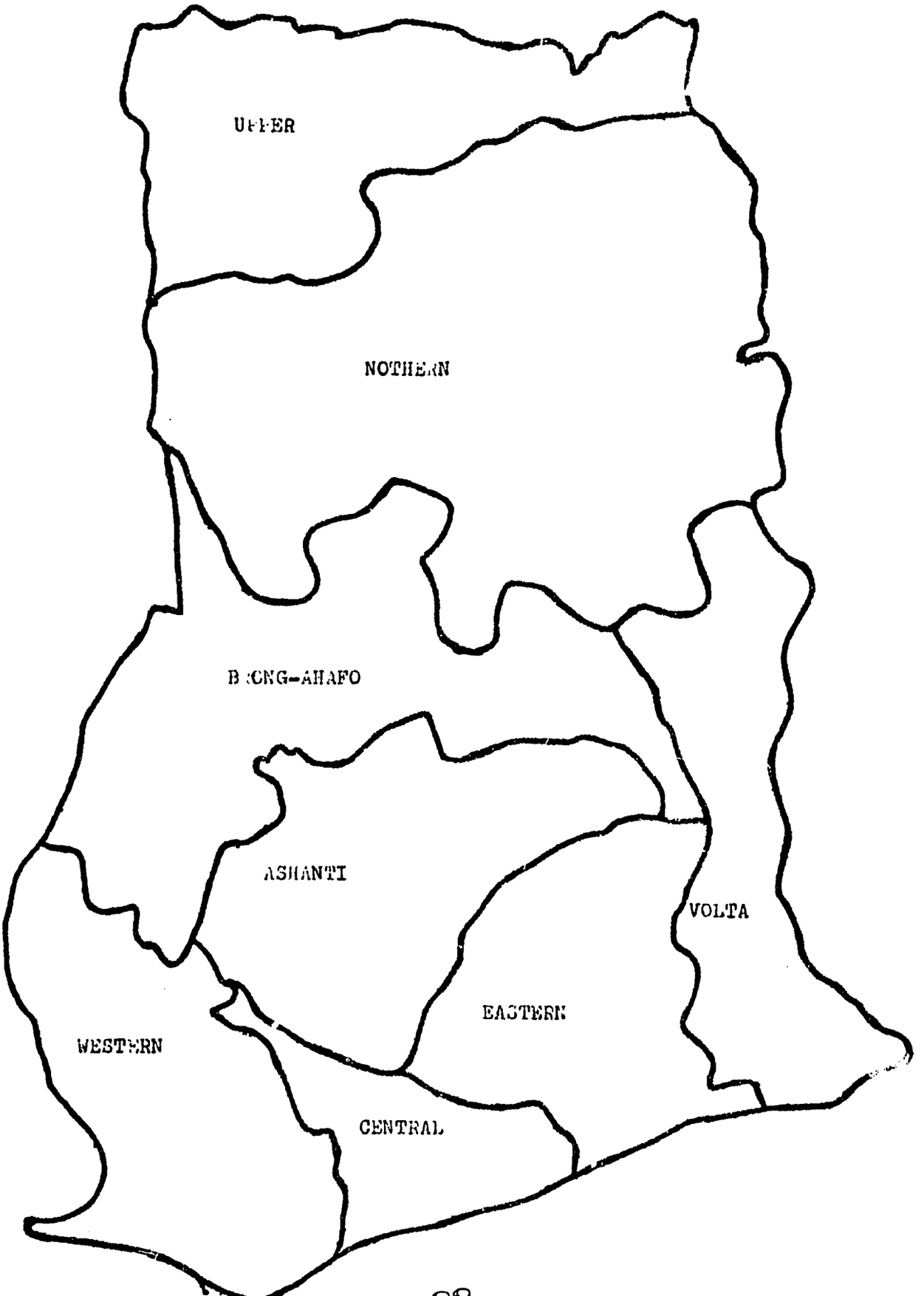
Exchange rates that were applicable for the yearss discussed in this paper are as follows:

February 7,1972 to present ¢1 = US$0.78
December 27,1971 to February 7,1972 N¢1 = US$0.55
July 8,1967 to December 27,1971 N¢1 = US$0.98
February 23,1967 to July 8,1967 N¢1 = US1.40
Prior to February 23,1967 ¢1 = US$1.17

Because of the various exchange rates in effect over the period covered in paper it was decided to convert all Cedi costs into dollars at the present rate of 1¢ = US$0.78 so as to give a constant Dollar value

Major abbreviations used in the text are:

ADB = Agricultural Development Bank
NIB = National Investment Bank
CPD = Crop Production Division, Ministry of Agriculture
GFS = Group and Cooperative Farm Credit Scheme


UPPER
NORTHERN
BRONG-AHAFO
ASHANTI
VOLTA
EASTERN
WESTERN
CENTRAL

A REVIEW OF SMALL FARMER CREDIT IN GHANA

I. Introduction

Prior to the 1960s, agricultural credit in Ghana was provided almost entirely by relatives, friends and money lenders. The earliest attempts at institutional credit, however, started with the granting of credits by cocoa cooperative societies during the 1931/32 cocoa season. In April 1964, the Bank of Ghana established a Rural Credit Department to study the problems of agricultural credit and to prepare the necessary legislation, plans and procedures for the establishment of an agricultural credit bank. In April 1965, Parliament passed an act (Act 286) to incorporate the Agricultural Credit and Cooperative Bank. The new bank started its operations in August 1965, taking over the assets and liabilities of the Rural Credit Department of the Bank of Ghana. In April 1967, the initial act was amended by a decree of the National Liberation Council (Decree 182) and the bank's name changed to the Agricultural Development Bank (ADB). The National Investment Bank (NIB) was formed in 1963 to provide capital for investment in industry, agro-industry and large scale farming. Besides the ADB and the NIB three other institutions are currently extending credit to agriculture. They are the Ghana Commercial Bank, the Standard Bank of Ghana and Barclays Bank.

Volume of Credit

Table 1 gives an idea of the amount of credit provided to the agricultural sector in recent years by the various institutions. These figures represent lending primarily to the agro-industries and large scale farms. Lending to small scale farming by the institutional sources has been limited almost entirely to credit schemes of the ADB. The reasons given for not providing credit to small scale farmers are usually ones of 1) high cost of servicing and 2) difficulty of supervision and collection.

Magnitude of Small Farmer Problem

Ghanaian agriculture is predominantly composed of small holders. In the 1970 Sample Census of Agriculture it was estimated that there were 805,200 land holders in agriculture in Ghana, of which 81% were full-time holder-operators. The 805,200 households had an average size of 5.6 people resulting in an estimated farm population of 4,517,800 people or roughly 50% of the total population 1/

Table 2 gives the size distribution of holdings. Thirty percent of the holdings are less than two acres, 55% less than four acres and 82% less than 10 acres. At the other extreme, less than 2% of the hold-

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1/ Ghana's population was estimated by the 1970 Census to be 8.5 million.

Table 1 - Loans and Advances to the Agricultural Sector, 1962-71, (1,000 Cedis) 1/

Source	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Commercial banks	2500	18100	7000	10000	13800	3200	3800	10000	9048	16154
National Investment Bank	-	750	224	290	405	353	1233	769	692	-
Agric. Development Bank	-	-	-	-	1142	1484	2140	3424	4593	8308
Total ..	2500	18850	7224	10290	15347	5037	7173	14193	18375	

Source: Loans and advances outstanding December 31, Bank of Ghana annual reports for various years, and annual Reports for various years for National Investment Bank and Agricultural Development Bank.

1/ Due to conversion problems arising from the several devaluations and revaluations, this table has not been converted to dollars.

Table 2 - Size Distribution of Holdings by Region, 1970

Region 1/	Western	Central	Eastern	Volta	Ashanti	Brong-Ahafo	Northern	Upper	All
Number (000)	68.1	81.1	148.2	108.6	147.7	71.6	61.2	118.7	805.2
Percentage: 0-1.9 acres	17.6	43.3	38.8	47.8	31.1	20.6	12.0	17.8	30.6
2-3.9	23.3	24.6	23.8	24.1	17.3	19.8	35.5	29.8	24.1
4-5.9	11.9	10.4	12.8	10.9	9.8	13.8	19.9	18.0	13.1
6-9.9	16.8	9.5	12.4	11.0	12.0	18.7	22.8	16.4	14.1
10-49.9	29.7	11.3	11.2	6.0	24.0	24.4	9.6	17.1	16.3
50 plus	0.7	0.4	1.0	0.2	5.8	2.7	0.2	0.9	1.8

1/ See Figure 1 preceeding the introduction of this paper for a map showing Ghana's administrative regions.

Source: Report of Ghana Sample Census of Agriculture 1970, Volume I, Economics and Marketing Division, Ministry of Agriculture, Accra, March 1971.

ings are greater than 50 acres. Unfortunately, the percent of land by size of holding is not available. However, it is generally accepted that Ghana is not troubled with a land distribution problem at present.2/ Very little additional information is available on the small farmer as a group but in 1970 of the 805,200 holders, 111,100 (14%) were classified as producing for subsistence only, while 289,700 (36%) were classified as "mainly" subsistence and 404,400 (50%) were operating mainly for sale3/ Table 3 summarizes the available data with respect to production for market and farm size. If we consider 10 acres and less as a small holding, slightly over 40 percent of the small cultivators in Ghana produce mainly for cash sale. Probably no more than half of these are cocoa farmers 4/ Therefore, it is estimated that about 65 percent of Ghana's farmers are small food crop farmers (cultivating less than 10 acres)of which some 20 percent are producing only for subsistence, 50 percent are producing a surplus no larger than their own consumption and the remaining 30 percent are producing mainly for sale.

While the small food crops farmer is dominant in Ghana, as noted above, almost none of the institutional credit has reached him in the past. One problem for the institutional lender in Ghana is that the cost of securing funds and making a loan to a small farmer is almost certainly higher than the expected return at current interest rates 5/. Uncertainty of repayment is also a problem since the Ghanaian farmer typically has no assets to provide as collateral, not even land. Under the Ghana land tenure,

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2/ This is not to say that Ghana has no land tenure problem. The problem of tenure is discussed briefly on page

3/ The definitions used for the classification were as follows: (a) operated for subsistence only - no cash crop cultivated and little or no sale of food crops, (b) operated "mainly" for subsistence - more than 50% of produce intended for home consumption, and (c) operated mainly for sale - more than 50% of produce intended for sale.

4/ The average size of cocoa holding in 1970 was estimated to be 12 acres (Ghana Sample Census of Agriculture, 1970).

5/ The ADB, for example, cannot charge more than 6 percent interest on its loans but it must pay 7½ percent on savings deposits it receives. As of December 1969, all loans to small farmers (initially defined as less than 100 acres) were required to be guaranteed under a Bank of Ghana, the Central Bank) guarantee scheme at a cost of one percent on the outstanding balance. In addition, all guaranteed loans were to draw no more than 9 percent interest, leaving only half of one percent margin above the current cost of securing money through savings deposits, (the 7½ percent rate on savings deposits has been effective since late 1971). Commercial banks currently loan to the agricultural sector at a rate of about 14 percent.

Table 3 - Type of Holding by Size of Holding

Region	Western	Central	Eastern	Volta	Ashanti	Brong-Ahafo	Northern	Upper	All Ghana
Holdings (000)	68.1	81.1	148.2	108.6	147.7	71.6	61.2	118.7	805.2
Subsistence only %	5	7	2	9	6	5	22	54	14
% of which were:									
0-3.9 acres	92	98	87	100	95	79	53	65	73
40-9.9	8	2	13	0	2	17	34	31	23
10+	0	0	0	0	3	4	13	4	4
Mainly subsistence %	24	25	23	60	19	43	77	41	36
% of which were:									
0-3.9 acres	59	93	82	82	92	53	46	30	65
4.0-9.9	28	6	16	16	5	37	46	43	27
10+	13	1	2	2	3	10	8	27	8
Mainly for sale %	71	68	75	31	75	52	1	5	50
% of which were:									
0-3.9 acres	32	57	56	45	34	27	75	8	43
4.0-9.9	30	26	28	38	28	30	50	0	29
10+	38	17	16	17	38	43	25	92	28

Source: Report on Ghana Sample Census of Agriculture, 1970, Vol.1. Economics and Marketing Division, Ministry of Agriculture, Accra, March 1971, pp.51-52.

land cannot be mortgaged because the holder does not own the land. It is given (or leased) to him to use but no title transfer takes place. It was to overcome some of the aforementioned problems that the Agricultural Development Bank (ADB) initiated Group and Cooperative Credit Sehcmes, (GFSs) for rice and maize. By having farmers come together, form a group or cooperative and apply for a loan, the bank was able to reduce the cost of making and supervising the loan since the group leader and cooperative officers could assist in preparing the loan application, identifying property for secutiry, etc. Also, by requiring all members of the group to repay their loans before the group or any of its members could receive another loan the Bank was hoping to have members of the group (cooperative) put pressure upon one another to repay the loan.

The Rice and Maize Schemes

The Rice Scheme was started in 1968 with one loan made to a cooperative union. In 1970, disbursements to the cooperative union were discontinued and the Group Credit Scheme was introduced, with a total of 10 groups cultivating 1,377 acres of paddy in the Northern and Upper Regions. In 1971, loans to cooperatives were reintroduced but these loans were given directly to cooperative societies. Eleven cooperative loans and 19 group loans were utilized in 1971. This program was expanded to 26 cooperative and 38 group loans in 1972. Unfortunately information is not currently available on the size of holding per farmer included in the group and cooperative scheme each year. The Rice Scheme in 1970, however, represented 2.7 percent of the paddy cultivated in the Northern Region and 0.9 percent of that cultivated in the Upper Region. (See Table 4).

The maize group farming was started in 1969 with maize farmers in the Central, Eastern, Volta, Ashanti and Brong-Ahafo Regions as participants. The maize scheme has grown from 20 groups totaling 265 farmers cultivating 2,045 acres in 1969 to 264 groups of 6,208 farmers cultivating 57,756 acres of land in 1972. Table 4 compares the 1970 program farmers and acreage with the all maize farmers in Ghana in 1970. As can be seen from the data, the program in 1970 covered 2.5% of total maize acreage and a smaller percentage of the farmers. However, if one compares the farmers and acreage in the Scheme in 1972 to the latest national estimate (the 1970 census), one finds that farmers in the scheme in 1972 represent approximately 1.5% of the maize farmers and 5% of the maize acreage in 1970. Regionally, the program is even more important. In the Brong-Ahafo and Central Regions which contain 90% of the program farmers and 88% of the program acreage the project beneficiaries consist of 9% and 6% respectively of the total maize farmers and 15% and 23% of the total maize acreage.

As can be seen also in Table 4, the average maize acreage of the Group farmers was considerably larger than the regional averages except in Brong-Ahafo where the regional average was 4 acres of maize versus 2.9 for the participants. Except for the Ashanti and Western Regions, the average maize acreage in 1970 per group farmer was 10 acres or below. Since 1970 the average acreage in Ashanti and Western Regions has fallen in 1972 to 14 and 10 acres respectively while the average in Brong-Ahafo has risen to 10 acres. Hence while the participants are small farmers in a relative sense they are still significantly larger than the average in their region.

Table 4 - Number of Holdings and Averages: All Farms, Rice and Maize Cultivators and Rice and Maize Scheme Participants - 1970

Region	Western	Central	Eastern	Volta	Ashanti	Brong-Ahafo	Northern	Upper	Total
Total holdings (000)	68.1	81.1	148.2	108.6	147.7	71.6	61.2	118.7	805.2
Rice cultivators (000)	4.2	1.2	1.5	5.2	3.2	2.0	5.6	37.9	60.8
Rice Scheme participants	nil	nil	nil	nil	nil	nil	3.2	5.9	9.1
as % total holdings	-	-	-	-	-	-	0.05	0.05	0.01
as % rice cultivators	-	-	-	-	-	-	0.57	0.26	0.15
Maize cultivators (000)	28.1	47.2	79.6	71.4	80.0	30.6	47.1	29.8	413.8
Maize scheme participants	70	376	N.A.	437	269	856	nil	nil	N.A.
as % total holdings	0.1	0.5	N.A.	0.4	0.2	1.2	-	-	N.A.
as % Maize cultivators	0.3	0.8	N.A.	0.6	0.3	2.2	-	-	N.A.
Total acres (000) 1/	595	395	842	400	1,975	807	350	864	6,228
Rice acres (000)	14	2	3	16	10	13	36	42	136
Rice Scheme acres	nil	nil	nil	nil	nil	nil	982	395	1,377
as % total acres	-	-	-	-	-	-	0.3	0.0	0.0
as % rice acres	-	-	-	-	-	-	2.7	0.9	1.0
Maize acres (000)	73	90	161	103	116	121	149	82	900
Maize Scheme acres	1,230	3,807	2,983	1,262	10,404	2,476	nil	nil	22,167
as % total acres	0.2	1.0	0.4	0.3	0.5	0.3	-	-	0.4
as % maize acres	1.7	4.2	1.9	1.2	9.0	2.0	-	-	2.5
Median size of holding	5.5	2.5	3.0	2.2	4.4	5.4	4.2	4.3	3.6
Rice acres/rice cultivators	3.3	1.7	2.0	3.1	3.1	6.5	5.4	1.1	2.2
Rice acres/Scheme participant	-	-	-	-	-	-	30.7	6.7	15.1
Maize acres/maize cultivator	2.6	1.9	2.0	1.5	1.5	4.0	3.2	2.8	2.2
Maize acres/scheme participant	17.6	10.1	N.A.	2.9	38.7	2.9	-	-	N.A.

1/ These estimates exclude pepper, tomatoes, pineapple, orange and other citrus which accounted for 110,000 acres at a maximum for all regions.

II. Program Characteristics

A. Background

1. Historical Summary

Rice Scheme:

An ADB branch office was established in Tamale in December 1968 to serve the Northern and Upper Regions. The loans for the 1969 crop season included 29 loans to individuals and one loan that was granted to a Co-operative Union that had received funds from Accra (ADB head office) in 1968. The Union was to disburse funds to its 19 member societies and be responsible for collection. As of July 31, 1972, only $25,579 of the original loan of $249,725 has been collected. Disbursements to the cooperative union were discontinued in 1970 but cooperative loans were revived in 1971 when 11 cooperative societies were granted loans directly. This portfolio was expanded to 26 societies and 38 groups in 1972. A summary of the Rice Scheme expansion over time is presented in Table 5. Farm Credit Service Offices (FaCSOs) were established in Bolgatanga, Bawku and Wa, Upper Region in 1970 to service the expanding number of clients,with the Bolgatanga FaCSo being converted to a branch office in 1972.

Loans under the Rice Scheme have been provided for equipment including tractors, combines and threshers and for operating costs, i.e. labor, seed, fertilizer, etc. In addition, land clearing has been financed.[6/] As Table 5 shows, expansion has been quite rapid since 1970 when the branch office started making loans.

6/ Up through 1972, 5,163 acres have reportedly been cleared by groups receiving ADB loans (similar data on cooperatives is not currently available). As shown in Table 5, this represents over one half of the rice cultivated by GFS participants.

Table 5 - ADB Cooperative and Group Scheme: Rice

	1968	1969	1970	1971	1972
No. of Groups/Societies	13	17	10	30	64
Northern	nil	nil	5	17	37
Upper	13	17	5	13	27
No. of Farmers	401	1,775	91	N.A.	N.A.
Northern	nil	nil	32	N.A.	N.A.
Upper	401	1,775	59	N.A.	N.A.
Acreage	1,497	14,783	1,377	4,194 4/	9,876 5/
Northern	nil	nil	982	3,049	6,535 5/
Upper	1,497 1/	14,783	395	1,145 4/	3,341
Disbursement ($000)	84.2	156.8	71.8 3/	201.1	N.A.
Northern	nil	nil	47.9	125.5	N.A.
Upper	84.2	156.8	23.9 3/	84.6	N.A.

1/ An additional 5,750 acres of other crops was reportedly cultivated.
2/ An additional 14,837 acres of other crops was reportedly cultivated.
3/ Includes $10,688 as final disbursement to the cooperative union that received funds in 1968 and 1969.
4/ Excludes one society for which acreage information was not available.
5/ Excludes two groups for which acreage information was not available.

Source: ADB Records.

Maize Scheme

The small farmer maize scheme was launched by the ADB on 11th, February, 1968. Initially the program was to give financial assistance to small scale maize growers in Eastern, Central, Ashanti, Brong-Ahafo and Volta Regions to increase maize output. In 1970 maize farmers in the Western Region became eligible for loans.

Table 6 shows the actual amount loaned each year. The growth in funds over time was due to both an increase in acreage and an increase in loans per acre. Initially (1969) the amount to be loaned was $7.80/acre for clearing, weeding and harvesting. In addition funds were provided for the purchase of equipment such as shellers, tarpaulins and jute bags to help harvest, store and market the maize. The farmers in the scheme argued that $7.80/acre was insufficient relative to the amount required for clearing, weeding and harvesting. The bank staff examined the cost of production for maize and agreed with the farmers that $7.80/acre was not sufficient.

As a result in 1970, the maximum cash loan was raised to $11.70/acre. In addition, loans in kind were provided to farmers who wanted to use improved seed and fertilizer. Funds were also provided for jute bags as well as plastic bags and chemicals to control weevil infestation in the stored grain. In the 1970 scheme the minimum acreage per farmer was raised from 4 to 6 acres with no upper limit.7/

In 1971 the Bank announced that it would operate two maize schemes, a package deal and a traditional scheme. Basically the participants under the package scheme were to adopt the improved cultural practices recommended by the Crop Production Division of the Ministry of Agriculture. However, due to the late announcement of the scheme the package program did not really get underway.

The Bank during 1971 continued to work to develop the package program and re-presented it in 1972. The package scheme as before, was to combine agricultural credit with improved cultural practices and the provision of intensive extension service. The package scheme was initially to be operated in six of the 40 agricultural districts of Ghana. These districts were: Mampong, Nkroanza, Swedru, Ho, Kpandu and Somanya districts. Actually 160 farmers in four districts participated and they cultivated 449 acres of maize. Also, as the Bank intended to phase out the traditional scheme over time (although no timetable has been established), it was decided that no new group farms were to be financed under the scheme but new, well organized registered cooperative societies could join the scheme.

Relation to National Credit System

As mentioned earlier the small farmer maize and rice schemes are programs of the Agricultural Development Bank and have no organizational links to the central bank. With respect to the position of these programs within the ADB they are coordinated by the Food Crop Division of the Loans Department of the Bank.

The relative share of the rice and maize scheme to the aggregate official agricultural credit portfolio of the entire banking system is very small. However, most of the credit other than that provided by the ADB has gone to agro-industries rather than farm firms (unfortunately, no breakdown is available). A more meaningful approach is to compare the share of the rice and maize schemes to total ADB lending as well as to food crop loans. For the years 1969, 1970 and 1971 the loans approved under the maize scheme represented 7.5, 8.2 and 14.5% respectively of the ADB loans approved while rice represented 15.5, 17.9 and 11.7% (Table 7). Over the same period rice and maize together represented 86.9, 63.2 and 78.5% respectively of ADB loans for food crops in period 1969-1972 (Table 7).

7/ While this was one of the rules for participation under the program, it also was not always observed. Cf. maize acreage per project participant for Volta and Brong-Ahafo on Table 4.

Table 6 - ADB Cooperative and Group Scheme: Traditional Maize

		1969	1970	1971	1972
No. of Groups/Societies		23	107	255	264
Western	..	nil	10	28	8
Central	..	7	36	99	150
Eastern	..	3	14	46	4
Volta	..	7	24	3	10
Ashanti	..	4	9	26	18
Brong-Ahafo	..	2	18	53	74
No. of Farmers	..	268	N.A.	6,078	6,208
Western	..	nil	70	283	77
Central	..	49	376	2,061	2,933
Eastern	..	80	N.A.	689	78
Volta	..	59	439	79	143
Ashanti	..	37	269	814	300
Brong-Ahafo	..	40	856	2,152	2,677
Acreage	..	2,045	21,826	53,240	57,756
Western	..	nil	1,230	2,205	795
Central	..	305	3,807	15,315	22,942
Eastern	..	765	2,988	4,825	618
Volta	..	256	1,262	774	1,266
Ashanti }		719	10,404	11,646	4,342
Brong-Ahafo }			2,476	18,505	27,793
Disbursement ($000)[1/]	..	47.4	297.6	572.8	626.1
Western	..	-	14.4	22.7	6.0
Central	..	2.0	45.3	142.4	244.3
Eastern	..	17.4	32.1	57.0	6.9
Volta	..	4.4	26.9	7.6	13.8
Ashanti }	..		164.7	136.2	50.8
Brong-Ahafo }	..	23.6	14.2	206.9	304.3

1/ Disbursement for 1972 is as of 31 August 1972.

Source: ADB Records.

Other Program Activities

The Group Farming Scheme is only one part of the total ADB operations. Other loans consist of 1) the Industrial Crops loans which are to finance ginger, sugar, tobacco, oil palm, cotton and citrus farmers; 2) Food Crops loans which besides the Group Farming Scheme for maize and rice provides loans to individuals and cooperatives growing yams, cassava, guinea corn, millet and other food crops; 3) Livestock loans which are responsible for lending to large and small scale livestock producers; 4) the Fisheries loans which are responsible for providing finance for the purchase of vessels and equipment by both small and large fishermen, and 5) the Agro-business loans which are loans to agro-related industries such as oil processing plants and cold storage and in addition it grants loans for tractors and rice combines to be used for custom hire services. Hence, the Group Farming Scheme is part of a much broader lending program most of which is operated separately from the Group Farming Scheme.

Table 7 - ADB Loans Approved: All Loans, Food Crops Loans, Rice and Maize Loans ($000)

		1969	1970	1971
Total ADB Loans	..	2,395.2	3,533.2	6,725.5
Food crop loans	..	634.8	1,460.1	2,242.1
Rice loans 1/	..	372.1	632.0	786.9
as % total	..	15.5	17.9	11.7
as % food crops	..	58.6	43.3	35.0
Maize Loans	..	179.4	291.3	974.5
as % total	..	7.5	8.2	14.5
as % food crops	..	28.3	19.9	43.5

1/ Includes loans to individuals as well as to groups and cooperatives in the Northern and Upper Regions.

Source: ADB Records

Note: The above comparison is for loans approved rather than for disbursements for information on disbursements is not available.

Relation to Pre-existing Local Institutions

The relationship of the ADB to the pre-existing local institutions has been covered in the introduction. With respect to the relationship of the Group Farming Scheme (GFS), to pre-existing credit sources, the GFS competes only with the traditional lenders such as money lenders, although money lenders are often involved in non-production loans which the ADB has avoided.

Agricultural Patterns and Potential

The rice and maize GFS combined, cover to varying degrees all eight regions of Ghana. The maize GFS covers the Volta, Eastern, Central, Western, Ashanti, and Brong-Ahafo regions while the rice GFS covers the Upper and Northern regions.

In the areas of the maize GFS the major crops grown are cocoa, cassava, maize, cocoyam and plantain. Of the five, all except cocoa are major food crops. At present, all of these crops are produced primarily by small farmers using traditional methods. To a certain extent cocoa, cocoyam, and plantain are complementary crops as cocoyam and plantain is planted to provide shade for the young cocoa trees during the first three years of growth. The plantain and cocoyam besides providing shade for the cocoa seedlings are also a source of income to the cocoa farmer while the waiting for the cocoa to become established.

As cocoa, cocoyam and plantain are grown in combination so are cassava and maize[8/] Maize cultivation in Ghana is characterized as being predominantly slash and burn. Land, normally under secondary or bush fallow is cleared and cropped for four to six farming seasons (2-3 years) before being allowed to return to fallow. Maize is commonly grown in pure stand for two or more seasons after clearing while in the third to fifth season, depending upon the observed rate of decline in soil fertility, the maize will often be intercropped with cassava. Both crops are planted together at the beginning of a major season. The cassava continues to mature after the maize is harvested and is itself harvested over a period of nine months to two years after the original planting, as required for home consumption or to meet cash needs. After the cassava is harvested, the land reverts to bush fallow for a period of three years or more. The period of bush fallow tends to be shorter in the relatively densely populated southern areas than in the northern areas.

The Crop Production Division of the Ministry of Agriculture has developed a set of improved practices for maize farmers. In general, it has not met with wide acceptance. This is perhaps due to several factors. One factor may be that the package requires credit which is often not available. A second factor is that the seed variety in the package is Diacol 153 which while being higher-yielding has taste characteristics which result in it being sold at a discount. Hence, the price discounting negates much of the advantage of the higher yields. Also, while the improved package is supposed to raise yields by 50 - 100% (from 16 to 24 or 32 bushels/acre)[9/], it also, requires additional labor inputs. A third factor of importance is that little is known as to how the package fits into the general farming system of the maize farmers. A final factor is that the set of packages require use of improved seed and fertilizer which in turn require credit, given the low level of capital availability to the present farmers. However, the delivery system for both improved inputs and credit are such that it is impossible to reach large numbers of farmers. Until the above issues are resolved, it seems doubtful that the set of improved practices will meet with wide acceptance.

8/ The information in this paragraph was derived from, Proposal for a Maize Development Project in Ghana, Ministry of Agriculture, Republic of Ghana April 1971

9/ One bag equals 220 pounds.

With respect to the Northern and Upper Regions, the major crops grown are rice, millet, guinea corn and yams. All of the above are food crops with much of the rice and yams being exported out of the region. There have been significant developments in rice and cotton in Northern Ghana in recent years.

Since 1968, rice acreage in Northern Ghana has increased from 28,000 to 126,000 acres in 1972. This expansion has not been due to one single factor but to a series of related factors. One favorable development was the introduction of a new rice variety C4/63 which was superior to the traditional varieties. A second factor was the Government of Ghana's (GOG) decision to raise the minimum price of rice from $5.46 to $6.24 per bag and to reopen the Government rice mills which were closed in 1966 due to lack of paddy. Also, the Federal Republic of Germany in 1970 in cooperation with the GOG developed a fertilizer project for Northern Ghana which resulted in larger and more timely supplies of fertilizer. A final factor was the provision of credit both by the commercial banks in the region and the ADB. At present, the IBRD is considering financing a rice development project in the Upper and Northern regions which if undertaken would lead to possible acreage expansion from 126,000 in 1972 to 232,000 acres in 1977.

B. Objectives

Rice - Early discussions of the Rice Scheme focused upon two objectives: (1) providing credit for tractors, bullocks, implements, seed and fertilizer to expand acreages and increase yield per acre and (2) relying upon cooperatives in particular to provide some of the needed supervision and thereby reducing costs to the ADB. As already mentioned, the first year (1968) a loan was made to a single cooperative union which was then to relend to its member societies who then were to make loans to their members. Due to the lack of appropriate supervision by the cooperative union, the Bank will, perhaps, lose essentially all of the funds granted in that loan. The ADB discontinued making loans through the cooperatives until the Department of Cooperatives made staff available in 1971 to more carefully supervise the funds disbursed. In 1970, the Bank sought an alternative means of lowering administrative costs by making loans to groups where the group leader was to assume responsibility for repayment and to act as a spokesman for the group.

The ADB has also looked to the cooperatives and groups as a means of grouping together a large enough acreage to fully utilize tractor and combine services and to help assure clients of mechanized services. Loans for tractors, combines and threshers have been made to individual members of the group/society who have then been expected to provide custom services to the other members of the group/society. Equipment loans have generally been granted on a four-year repayment schedule. Loans for land clearing have also been made covering the full cost of the clearing with repayment scheduled over four years.

Operating loans generally fall due at harvesting time and funds are made available at planting, weeding and harvesting time on a schedule approximating the cost of inputs required. Fertilizer and improved seed purchases

are in fact financed in kind by issuing purchase orders to the farmers which are presented to the Crop Production Division, (CPD) of the Ministry of Agriculture and later submitted to the bank for payment. Tractor hire services are frequently in kind also, where the work done is reported to the bank and the tractor operator's account credited and the cultivator's account debited.

Although funds are released at the time,additional inputs are required, the labor services in particular may be provided by the family and the dispersal of funds acts as a consumption loan to help meet the needs of the family until sale of the produce.

Maize - As already noted, the stated objective of the maize scheme was to give financial assistance to small scale maize growers in Eastern, Central, Ashanti, Brong-Ahafo and Volta Regions to increase maize output. This decision was based upon a combination of economic, social and political factors. The importance of maize as a major food crop, and the fact that the 1968 maize crop had failed and maize prices exceeded $6.00/bushel that season emphasized the need to expand maize production to increase local supplies and reduce the price to the consumer.10/ The fact that the program was aimed at small maize farmers (4-10 acres) reflects the concern of the Bank with income distribution and rural development as well as growth in output. Prior to the development of the Maize GFS, the ADB lending activities had been primarily concentrated on larger commercial farmers with the assistance and semi-subsistence farmers having to rely upon traditional credit sources such as money-lenders and traders. An additional factor in the decision to develop a program for the small farmers was that the agricultural sector is dominated by the small farmer11/ Given that the overwhelming number of farmers in Ghana can be classified as "small" farmers, there is significant political pressure on a public institution such as the ADB to develop programs for broader participation.

An objective that was not explicit in the initial year of the program but which has commanded more attention in the following years is the encouragement of farmers to adopt improved practices. This has culminated in the development of the Package Program in cooperation with the Crop Production Division of the Ministry of Agriculture. This concern with the adoption of improved practices reflects the belief that lending under the traditional scheme was primarily for expansion of land area and that with the estimated high unit cost or production under the traditional scheme it was difficult for farmers to repay their loans. Under the package deal the emphasis is on increasing yield per acre and less on expansion. (The minimum acreage under the Package Program is two acrea as compared with six under the traditional scheme). The expectation is that increasing yields will lower per unit cost of production, thus, increasing net revenue.

10/ Maize in Ghana is grown primarily for human consumption, in fact, maize is second to cassava as a provider of calories. As a result, maize price increases create severe budgetary difficulties for urban consumers and are a source of concern to any Government in power.

11/ The median size of holding cultivated is estimated to be 3.6 acres. Ghana Sample Census of Agriculture Volume I, Economics and Marketing Division, Ministry of Agriculture, Accra, March 1971.

The fact that the ADB is continuing the traditional scheme even though the Package Program has been introduced would imply that one objective of the program is to continue a flow of funds into the rural sector in spite of problems with repayment.

The purpose for which the loans could be used has varied over the life of the program. In the first year of the program (1969), loans were given to the participants for labor, jute and polyethelene bags, shellers, tarpaulins, scales, twine and EDIB capsules (for insect control). The loans for the shellers, tarpaulins and scales were for three years while the loans for labor and EDIB capsules were for one year.12/ In 1970 and onward the Bank has provided credit for fertilizer, improved see, labor, EDIB, jute and polyethelene bags. The loan for labor is given in cash with the other items being provided in kind. The shellers, tarpaulins and scales were dropped from the program after the 1st. year. Even though the ADB in theory provides credit for certain inputs, as a rule, only Package Program participants receive in kind credit.

C. Organization 13/

The bank's operations are controlled by a Board of seven directors representing the Ministries of Finance and Agriculture, the Bank of Ghana, and the Department of Cooperatives. The Chairman of the Board is also the full-time Managing Director of the Bank; he is assisted by an Executive Director who is also a member of the Board. Under an agreement between the Government and USAID, terminated in September 1970, ADB was advised by an American expert in Agricultural Credit.

The day-to-day activities of the bank are under the control of the Managing Director, who is appointed by the Government for a five-year period. The bank retains the services of independent auditors: Amorin, Agyeman, Ayeh and Co., chartered accountants with an office in Accra.

There are three main departments in the bank, the Accounts Department, the Loans Department and the Administrative Department, which in turn are split into various divisions. Each department is under a Director responsible to the Managing Director (See Organizational Chart on following page).

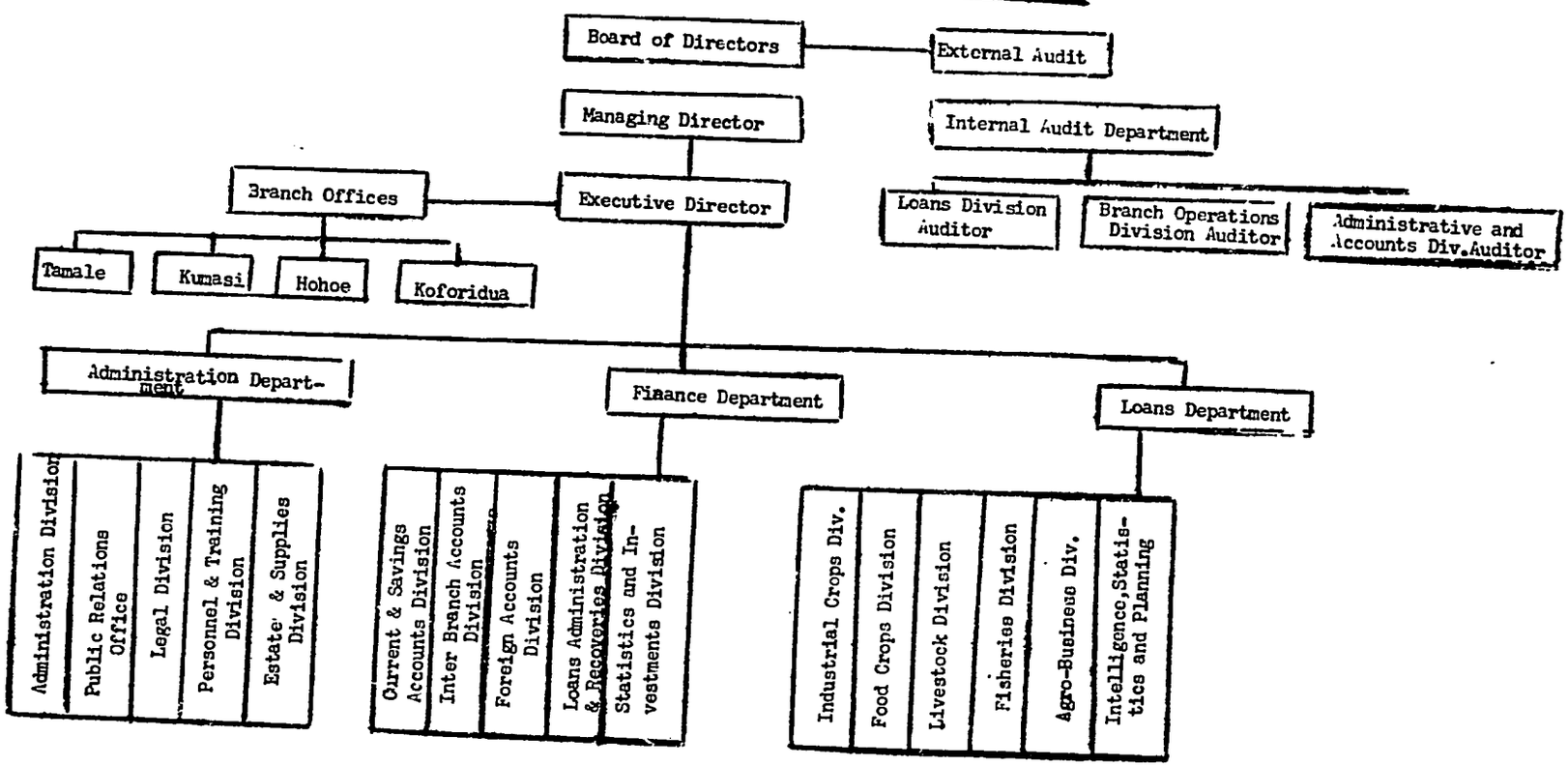
In addition to the office headquarters in Accra, the ADB has opened seven branches, one each in Takoradi, Kumasi, Koforidua, Tamale, Hohoe, Bolgatanga and Sunyani. There are also 12 Farm Credit Service Offices that have been established to supervise ADB loans. (See Table 8 for a list of the ADB Branches and FaCSOs.)

12/ In fact, the one year loans are really 16-month loans since loans are made in March and don't have to be repaid until June 30 of the next year.

13/ Much of the information in this section was drawn from Rice Development Project Feasibility Study, Volume IIA, Annex III, pp.104, 108 - 109.

Figure 2

AGRICULTURAL DEVELOPMENT BANK - ORGANIZATION CHART



The staff above senior clerk in the ADB on January 1,1972 totalled 79 of which 38 were posted in Accra. Although many of the professionals have graduated in Agriculture, only a few have adequate practical experience and consequently at present the technical appraisal of agricultural projects is rather weak. In addition, the supervisory staff are over extended and technical information is limited. Some staff have been sent to the United States for further training under the sponsorship of USAID (four in 1970/71), several additional staff members have received degrees from either Great Britain, USSR, USA or Germany.

Table 8 - Agricultural Development Bank Branches and FaCSOs

Branches	Date Opened
Head Office (Accra)	August 1, 1965
Koforidua branch (E.R.)	August 1967
Hohoe branch (V.R.)	December 16, 1967
Kumasi branch (A.R.)	August 16, 1968
Tamale branch (N.R.)	December 2, 1968
Takoradi branch (W.R.)	
Sunyani branch (B.A.)	
Bolgatanga branch (U.R.)	
FaCSOs	
Cape Coast (C.R.) FaCSOs	June 1970
Wa (U.R.)	May 1970
Swedru Agone, (C.R.)	November 1969
Bawku (U.R.)	May 1970
Bolgatanga (U.R.)	July 1970
Atebubu (Brong-Ahafo)	July 1970
Ejura (Ashanti Region)	July 1970
Tarkwa (WesternRegion)	September 1970
Tema - Greater Accra region	July 15, 1970
Sunyani (Brong-Ahafo)	January 26, 1970
Somanya (E.R.)	August 2, 1971
Denu	
Wenchi	
Kete-Krachi	

The FaCSO staff is responsible for assisting prospective clients in completing their loan application, supervising loans and collection. Some of the FACSOs consist only of a loans assistant and a typist. Larger FaCSOs in addition have a project officer attached to them. Each FaCSO is responsible to one of the branch offices. Loan applications of up to $3,900 are approved in the branch office. Loans in excess of $3,900 go to the head office for approval and loan applications exceeding $15,600 must be approved by the Board of Directors.

The loan operations for the Rice Scheme are directed by the branch office at Tamale. An officer from the head office (Accra) and his assistant have been given responsibility of coordinating the Maize Schemes in the various regions. Actual loan appraisal, supervision and collection is the responsibility of the branch offices in the Maize Scheme as inRice, but data is collected, policies reviewed, etc. by the officers in charge at the head office.

D. Beneficiaries

Loans to cooperatives were to be based upon the following criteria:

(a) The society has been registered and operating for at least three years;

(b) There is a good secretary and committee and members who support the society;

(c) There are records of crops marketed by the society and members;

(d) The society is in a reasonably sound financial position enabling the society to provide some of the loan from its own funds.

Loans to groups were without the above restrictions. The general requirements for each of the schemes are discussed below.

Rice Scheme

The loans to groups and cooperatives under this scheme apparently involved no special requirements, only that the farm plan should be viable.

Traditional Maize Scheme

In 1969, the Traditional Scheme was restricted to farmers in the Volta, Eastern, Central, Ashanti and Brong-Ahafo regions since they are the major maize growing regions in Ghana and these were areas with branch and/or farm credit service offices in 1969.

With respect to the selection of the individual farmers the following was the criteria listed in 1969:

1) The farmers should have been growing maize for some time.
2) The acreage to be cultivated by each participant should be between 4 and 10 acres.
3) There should be a common storage facility.
4) The farms of a group or cooperative society should be in a contiguous area and accessible to a tractor.
5) There should be no inter-cropping.
6) Participants should be members of an existing cooperative society or should be progressive farmers capable of being organized into Unions for the Scheme.
7) Communications between the Bank and participants should be through a management committee elected by the participants.
8) The Management Committee should satisfy the Bank that each beneficiary under the Scheme possesses farming rights on the plot for which the loan is disbursed.

9. The farms should be located within 10 miles radius of a selected shelling center.

In 1970, 2 was modified so that 6 acres became the minimum and no maximum was specified.

The requirements - 2,3,4 and 9 for the traditional Maize Scheme have not been strictly adhered to. For example, there are cases listed where a farmer was in the program but did not have the minimum acreage. Also, the requirement that groups should be in a contiguous area and accessible to a tractor has been modified so that group members must all be from the same general area. The requirement for a common storage facility has not been adhered to either, but the bank has continued to urge Group members to build such facilities. The requirement that farms be located within 10 miles radius of a selected shelling center has never been enforced because there are no shelling centers; these were planned to be developed over time, but have not.

Maize Package Program

The eligibility requirements for membership in the Package Program are as follows:

a. The package program will be initially operated in Mampong, Nkroanza, Swedru, Ho, Kpandu and Somanya districts;

b. Farmers who participated in the 1969 and 1970 Maize Production Scheme and have paid up their loans in full. Individual large scale maize farmers may also join the scheme;

c. New farmers may participate in the Scheme upon recommendation of the Crop Production Division;

d. Participants must cultivate a minimum of 2 acres;

e. The participants must follow the improved practices recommended by the Crop Production Division of the Ministry of Agriculture (MOA).

E. Lending Policies and Procedures

Portfolio - Tables 5 and 6 summarize the results of the lending activities of the ADB Cooperative and Group Farming Schemes for the period 1969-1972. While data on the aggregate rate of turnover of clients is not available, data does exist on maize scheme loans for Swedru district over the period 1969-1971 (See Table 9). Unfortunately, the 1972 data is not yet available so that the number of observations is limited. However, it can be seen that for the farmers who started in 1969, 11 (22%) dropped from the program in 1970 and a further 15 dropped in 1971 which means that in 1971 only 48% of the farmers who began with the scheme in 1969 were still participants. With respect to the 258 farmers who joined the Scheme in 1970, 235 or 91% were still participating in 1971. From the data presented it would seem that the rate of dropout in the second year of the scheme was not excessive. The reason for the large dropout rate of the farmers who began with the Scheme in 1969 is not readily apparent. The only similar information on the Rice Scheme is the participation of cooperative societies. In 1972, two of the six co-

operative societies that had received loans in 1971 were dropped from the scheme due to failure to repay a minimum amount on their loans.

Table 9 - Group Participants in Swedru district for Years 1969-71.

	1969	1970	1971
Number of Farmers	50	297	N.A.+
Number of 1969 farmers	50	39	24
Number of 1970 farmers	-	258	235
Number of 1971 farmers			N.A.

Note: N.A. = Not available. Source: ADB records.

In 1969, 1970 and 1971, the rate of interest charged varied from 7 - 9%. However, in 1972, by Government decree, the rate of interest on agricultural loans was reduced to a flat rate of 6% to encourage investment in the agricultural sector.

Due to the lack of assets other than land (which as a rule cannot be pledged as collateral) farmers borrowing under the program are not able to provide collateral. As a result, the Bank must base its loan upon the viability of the loan and the character of the borrower, although it does take a lien on the crop to be grown. Of course, in the case of loans for fixed assets such as tractors, the Bank has some leverage due to the fact that it can reclaim the asset if the borrower does not keep his payments up.

One policy that the ADB has used to try to encourage repayment is to require that every member of a Group that borrows must repay their loans or the other members of the Group must pay for any delinquent member or else the entire Group is ineligible for a loan. It is thought that this policy will result in pressure on potential defaulters by other members of the Group. While in theory no group is eligible for a loan if any member is delinquent, in actual practice modifications are made. The actual decision as to who gets a loan is primarily made at the branch office, so the extent to which the above rule is followed depends upon the branch manager. Some managers require all members of a group to have repaid, or if not repaid to have a valid excuse for nonpayment such as bad weather. Other managers allow groups to expel delinquent members and if the record of the group in general is good, the manager allows the group to continue to borrow even without repayment of delinquent member loans.

Besides the subsidized interest rates provided by the ADB the farmer purchases of fertilizer and improved seed are subsidized by the Ministry of Agriculture. In particular, the Ministry maintains a uniform price throughout the country for fertilizer of $2.18. This represents only approximately 35% of the average cost of delivering a bag of fertilizer. In the case of maize, the Ministry purchases seed from registered seed growers at $15.60 per 200 lb. bag which is less than 50% the current cost of producing seed on the government-operated farms. The Ministry cleans, stores and sells the seed to farmers for $7.80 per 200 lb. bag, which is less than 50% of the true cost of the seed.

Appraisal Technique

In the actual application procedure for a loan by a Group, the first step is for a group of farmers to join together and decide upon their acreage (with the requirement that each have at least 6 acres). The Group then applies for a loan either directly or through the District Crop Production Officer. If the District Officer is involved, he passes the data on to the nearest ADB office with his comments. In either case, upon receipt of the application, the ADB representative scrutinizes the loan with respect to the condition in the loan agreement. If everything is in order the Bank officer approves the loan. Whether the Bank approves the loan or not, the officer then must let the Crop Production Officer and the Group know the status of application. The Bank officer will convey the decision to the group either by letter or word of mouth whichever is most convenient and feasible.

If the Bank approves the loan then the next step is for the Bank officer to examine the area of the Group before making the first disbursement (which is after the land is cleared and prepared for planting). After checking the area prepared, if everything is acceptable the officer prepares the disbursement form and fixes a date for the Group to come to pick up their check. The location for disbursement of the checks is always in a town with commercial banking facilities so that the checks can be cashed. With respect to the actual disbursement all members of the Group must come and pick up their separate checks.

The second disbursement of the cash loan is after the second weeding but before harvesting. Once again, the ADB must first visit every group member's farm to ensure that the correct acreage has been planted and cared for. Once the acreage has been verified the same procedure as before is followed for the second disbursement. If in checking the acreage of the farmers in the Group the ADB officer finds that the acreage of any member at the time of the second disbursement is not the same as that of the first disbursement, then the second payment is only for the reduced acreage of the member.

In the case of in-kind inputs the farmer receives his inputs from the District or Sub-district Crop Production Officer and signs for them(either signing by writing his name or giving his thumbprint). In fact, the members of the package program scheme are approved by both the Crop Production and ADB officers and a list of each is kept at the respective offices. The invoices signed by the farmers for the inputs are forwarded to the Crop Production Division headquarters from where they are sent to ADB for payment. The ADB has the branch and farm credit service offices verify that the farmers received the inputs. Once this has been done, the ADB then pays the Crop Production Division for the inputs.

In the general loan application, the ADB collects data on: (1) where the farm(s) are located, the acreage, whether freehold or leasehold, who manages the farm and the amounts owed and to whom; (2) the purpose and amount of loan as well as total cost of project, sources of additional capital needed and security offered for loan; (3) particulars of marketing of produce. This information is then used to evaluate lender asset availability and prior indebtedness.

Rice

The volume of loans under the Rice Scheme is shown in Table 5. The amount loaned per acre to cooperatives in 1972 is shown below:

Plowing	..	..	$4.68
Harrowing (twice	..	..	4.68
Seed	..	..	3.12
Fertilizer	..	..	5.93
Weeding	..	..	3.90
Harvesting	..	..	3.90
			$26.21

Only the weeding and harvesting component of the loan is given in cash. The disbursement for in-kind inputs generally takes place in July while the funds for weeding and harvesting follow in August and October respectively. Operating loans are generally expected to be repaid in February of the next year. Loans repayment for tractors are scheduled over 4 years. In 1970 and 1971 loans were scheduled to be repaid in 3 years. That period was extended to 4 years in 1972. In addition to the cultivation loan described above, GFS participants have also been eligible for$15.60/acre for land clearing.

Maize

As shown in Table 6, the period 1969-1971 was one of rapid growth in the maize scheme, with the total volume of loans increasing at a much slower rate in 1972. As mentioned previously, loans to the farmer, at least in theory can be of two kinds, cash and in-kind. The cash component is $11.70 per acre. This is divided into two payments: $7.80 after land preparation and $3.90 after the second weeding. With respect to the in-kind component, the Bank will provide in cooperation with the Crop Production Division, MOA, improved seed and fertilizer as well as baffles,14/ EDIB capsules and jute bags. The value of the in-kind component is $11.92 consisting of:

Fertilizer	..	$7.80
Seed	..	.78
Baffles	..	.22
EDIB	..	1.87
Jute bags	..	1.25
		$11.92

While in theory participants from either the traditional or package deal are eligible for both loans, in fact the bank only provides in-kind loans to farmers approved by the local extension officers. This reflects the concern by the bank that farmers not approved by the extension officer will mis-use the inputs. This action was the result in part of the ADB experience with farmers in the traditional scheme in 1969 and 1970. The Bank reviewed the in-kind loans for shellers, tarpauline, etc. after the 1970 season and concluded that the in-kind inputs required supervision, to be properly utilized. As a general rule, only the package program farmers are currently receiving the in-kind loans.

14/ Baffles are aluminum shields placed on storage barns to prevent entry of rodents.

If one examines the average Cedi value of loans disbursed per acre over the four-year period one finds that it is $23.40, $14.04, $10.92 and $10.92 for the years 1969, 1970, 1971 and 1972 respectively. The reason for the declining average loan per acre over the period 1969-71 has been due to the Bank disapproving the in-kind loans. The fact that the 1971 and 1972 figures of $10.92 are $0.78 below the maximum allowable results from the acreage estimates being based upon the acres for which the initial disbursement is given. 15/ It at times occurs that when the second disbursement is to be made and the Bank officer examines a farm the acreage may be less than the original acres due to bad weather or neglecting to plant or weed properly. In such a case the officer reduces the second disbursement to take into account the lower acreage. Also, at times the Bank is late in making disbursements. If harvest time is past before the last disbursement has been made the disbursement is cancelled. This is based upon the argument that the farmer does not need the loan since he can now sell his crop.

Disbursement of the loans begins in March and continues until harvest in July and August. Originally the bank set the date at which the loan must be repaid as December 31 of year in which loan was made. However, this policy brought forth a great number of complaints by the borrowers. The maize marketing season in Ghana is from July to June with the highest prices prevailing in the January-June period. Hence the Bank policy of requiring the settlement of the loans outstanding by December 31, meant that farmers would have to sell some or all of their maize at lower prices than what would normally prevail later in the marketing year. As a result of the objections of the farmers, the Bank extended the period for which the farmers could pay back their loans from December 31 until July 31. If as of that date a farmer has not paid his loan he is delinquent and ineligible for further credit. In theory if all loans are not repaid all members of the group are ineligible for further loans until the group meets the obligation of the defaulting member. However, as mentioned before the Bank takes a flexible approach to the problem.

F. Collection

As discussed above, the loan officers at the FaCSo or Branch level are responsible for repayment. If a loan falls over due by 6 months, a penalty interest rate of 10% becomes applicable (instead of the usual 6%) and if no response is received from the client concerning the arrears, the case is sent on to the ADB's legal section in the head office (Accra). If a loan falls due and the client is unable to pay and no dishonesty on the part of the client is apparent, the loan is re-scheduled at the usual interest rates.

When a case reaches the legal section either the ADB or one of its external solicitors threatens court action. If a mortgage has been taken at the time of issuing the loan, the ADB may also threaten foreclosure. If no mortgage is available and no satisfactory response is received from the client, a judgment is sought from the courts which establishes the debt and if not paid within a week or two a court order is sought to sell the client's personal goods.

15/ Apparently farmers have utilized the full per acre loan amount.

An offer by the client to settle outside of court is accepted at any time in this process. The ADB takes the case to court as long as the arrears exceed $390.00. Otherwise, efforts are made to persuade the client to repay through personal contact or by correspondence.

To date the ADB has taken less than 30 cases to court (20 individuals, 6 corporations, and 2 cooperatives) and approximately 50% of those loans are in the process of being repaid. Last year, approximately 15 defaulted loans were referred to the legal section. Three were issued writs by the legal section and ten were referred to external solicitors who issued writs to six, two made arrangements for repayment outside of court and two have not been traced. The remaining two loans were less than $390.00, so they were pursued outside of court.

To date no groups have been taken to court. The cooperatives and groups are treated as legal entities and in the case of the two cooperatives that have been taken to court, the guarantees made by the executives of the cooperatives are being acted upon. Liens on tractors have been acted upon in six cases and the bank is currently attempting to sell two houses which were given as security (some difficulty has arisen with mortgages on houses since occasionally the individuals involved have secured the houses on hire purchase, i.e. the bank has a second mortgage). In one case, a crop hypothecation was acted upon by selling maize that was in storage. Difficulties sometimes arise where property is pledged that belongs to the community and therefore cannot be sold (this may occur where the client is a chief).

The only repayment records currently available to the authors on the rice scheme is for loans to cooperatives in 1971. As of July 31,1972, approximately 65% of the crop loans had been repaid. As mentioned earlier, two cooperatives were dropped from the program because of poor repayment.

The repayment performance under the maize scheme is provided in Table 10 for the period 1969-1971. Out of $869,767 loaned, $584.297 was repaid as of June 31,1972. This represents a repayment rate over the period of 67%. There has been in fact substantial variation over the period 1969-1971. The 1969 repayment rate was 91% and in 1970 it was 49% as of December of the following year.

The improvement in the repayment rate for 69, 70 and 71 loans combined over the 1970 repayment rate suggests that either further payments have been received on the 1970 loans since December 1971 or the repayment rate on 1971 loans has substantially improved over the 1970 rate.

Table 10 - Loan Disbursement and Repayment for the Maize Group Farming Schemes 1969-1971 1/

	1969 2/	1970 3/	1969-1971 4/
Loan disbursement	$47,744	$315,944	$869,767
Loan repayment	43,598	157,478	584,297
Amount	4,146	158,466	284,951
% repayment	91%	49%	67%

1/ The disbursement shown here do not agree exactly with data presented in Table 6. While the absolute numbers are not in agreement, the percentages represented here would not be significantly changed if the necessary adjustments could be made to bring the two sets of figures into agreement.

2/ Repayment as of January 1971.

3/ These figures were derived by subtracting 1969 disbursements and loan repayments as of January 1971 from disbursement and repayments totals for 1969-70 as of January 1972. As such the data represents the maximum repayment rate on 1970 loans as of January 1972. If in fact the 1970 repayments included repayment of the balance due on 1969 loans, this would only reduce the 1970 repayment rate to 48.5% as of January 1, 1972.

4/ Repayment as of June 30, 1972.

G. Costs and Finance

The ADB's 1966-71 investment portfolio is presented in Table 11. As indicated by the percentage distribution of the portfolio, the years 1969-71 have shown a substantial shift towards loans as opposed to other investments. (The volume of loans had been increasing from 1966-68, but at a rate that was very similar to the growth of the overall portfolio.) A repayment rate of 65% or less appears to be common in the ADB's operations to date, indicating that paid-in capital has been a major source of portfolio growth.

Table 12 attempts to give a picture of the cost of ADB's loan operations relative to its loans volume. Expenses as related to the loan volume decreased substantially in the years 1970 and 1971 primarily as a result of spreading costs. This spreading of costs is represented in part by the fact that fixed assets as a percent of loans outstanding decreased from 4.2% in 1969 to 1.4% in 1971. A similar reduction in salaries and other operating costs per Cedi loaned has occurred over those years as well. Unfortunately, information is insufficient at this writing to give a clear picture of performance in loan operations in relation to the reduction in costs. It is clear, however, that unless the cost per dollar loaned drops below the 6.9 cents experienced in 1971, the ADB will lose almost one cent per dollar loaned with the new six percent maximum rate of interest. As long as this situation prevails, expansion of the bank's investment portfolio

Table 11 - ADB Investment Portfolio as of December 31, 1966-1971 ($1,000) 1/

	1966	1967	1968	1969	1970	1971
Cash	46.3 (1.2)	104.4 (2.0)	129.9 (1.9)	512.6 (6.0)	595.8 (5.6)	762.1 (5.5)
Short-term investments	284.1 (7.3)	1,197.1 (23.1)	1,393.3 (20.7)	1,068.6 (12.5)	1,030.8 (9.7)	3,717.2 (26.9)
Loans and Advances	890.4 (22.9)	1,157.8 (22.3)	1,669.5 (24.7)	2,671.0 (31.2)	4,592.9 (43.2)	8,307.7 (60.2)
Other assets	38.9 (1.0)	100.1 (1.9)	138.0 (2.0)	197.5 (2.3)	284.4 (2.7)	300.1 (.2)
Medium and long-term	2636.4 (67.7)	2,638.0 (50.9)	3,418.0 (50.6)	4,120.0 (48.1)	4,120.0 (38.8)	719.2 (5.2)
Total	$3,896.0 (100.1)	5,197.4 (100.2)	6,753.7 (99.9)	8,560.7 (100.1)	10,623.9 (100.0)	13,806.3 (100.0)

1/ Percentages of total portfolio is shown in parenthesis.

Table 12 - ADB Loans Outstanding and Investment and Operating Expenditure

	1967	1968	1969	1970	1971
1. Loans Outstanding 1/ ($1,000)	1,157.8	1,669.5	2,671.0	4,592.9	8,307.7
2. Ave. Loans outstanding 2/ ($1,000)	1,024.1	1,413.7	2,170.3	3,631.9	6,450.3
3. Value of fixed assets 3/ ($1,000)	55.8	76.4	113.3	98.0	112.3
4. Total expenses ($1,000)	114.7	186.1	296.2	369.1	446.4
a) Salaries	67.1	109.4	163.6	203.4	243.2
b) Operating expenses	34.6	57.5	97.8	129.2	157.1
c) Depreciation	13.0	19.3	34.7	36.5	46.1
5. Salaries and operating expenses as % average loans outstanding	9.9	11.8	12.0	9.2	6.2
6. Total expenses as % ave. loans outstanding	11.2	13.2	13.6	10.2	6.9
7. Change in salaries and operating expenses ÷ change in average loans outstanding	0.167	0.125	0.049	0.024	
8. Change in total expenses ÷ change in average outstanding	0.183	0.145	0.050	0.027	
9. Fixed assets as % of loans outstanding 1/	4.8	4.6	4.2	2.1	1.4

1/ As of December 31; 2/ Average of December 31 of current year and December 31 of previous year; 3/ Depreciated value as of Dec. 31.

(and fixed assets) will necessarily depend upon new paid-in capital.

H. Complementary Factors

Rice Technology[16/]

The recommended production practices for rice producers in Northern Ghana are as follows:

(1) Land preparation - prepare land in April-May by using mechanized plowing and harrow once about 5 days after weeds have started to grow; harrow a second time about 4 days later to eliminate remaining weed growth;

(2) Seed[17/] - use 70 lbs. of C4-63 per acre except for deep valley areas. Use 70 lbs. of D52-37 per acre for deep valley areas since this variety has a longer growing season (150 days) than C4-63 (120 days);

(3) Fertilizer - use 2 bags of 15-15-15 per acre and one bag of 20-0-0 with C4-63. Apply 15-15-15 at planting time and 20-0-0 as a top dressing 6 weeks later. If D52-37 is used then apply one bag of 15-15-15 at planting time. A heavier application rate will cause lodging with D52-37;

(4) Planting time - plant C4-63 by mid-June and D52-37 about mid-May;

(5) Weeding - undertake two weedings, the first about six weeks after planting and the second four weeks later;

(6) Harvesting - harvest rice at maturity and as soon as the field is sufficiently dry to undertake the operation.

If a farmer followed the above practices utilizing the C4-63 seed, he was expected to receive a yield of 10 bags of paddy (180 lb/bag) as compared to a yield of 5 bags under traditional practices. The major difference between traditional and improved practices is mechanical versus hand clearing and land preparation, using improved seed and fertilizer and weeding a second time. As a result of following the practices not only were yields expected to increase from 5 to 10 bags per acre but gross income was to rise from $35.49 to $75.66 while net income was to increase from $10.37 to $28.16.

16/ This information adapted from Rice Development Project Feasibility Study, Vol.1, September 1972, MOA.

17/ The C4-63 is the improved variety brought in from the Philippines and D52-37 is the local variety.

The improved technology implies a greater need for credit due to the reliance upon mechanical services as well as need to purchase improved seed and fertilizer as well as the possible need to hire additional labor.

To meet this need the bank provides credit in both cash and in-kind. The in-kind inputs are mechanization services for land preparation, seeds and fertilizer with cash loans advance for weeding and harvesting labor. The cash loans are given directly by check to each member. The seed and fertilizer are provided by the Crop Production Division as mentioned earlier. With respect to the mechanical services, each Cooperative or Group has at least one tractor. The owner of that tractor[18] is to provide the necessary mechanical services to the other members of the Cooperative or Group. The person for whom the service is provided then signs (by written signature or thumbprint) a form stating what service was provided and for how many acres. The tractor owner is then reimbursed by the ADB.

Maize Technology[19]

As mentioned earlier, the maize program was initially concerned with providing funds for hiring labor for expansion of acreage of maize. However, the experience with this type of lending was not completely satisfactory as it did not reduce the average cost of production and, if prices fell, farmers had a difficult time covering their cost and repaying their loans. In 1970, the ADB expanded their lending to also provide fertilizer and improved seed in kind. This program was continued in 1971. Also, in 1971, the ADB entered into discussion with the Crop Production Division of the MOA about cooperating on the development of a Package Program for maize farmers. The package put forth to the farmer consisted of the following practices:

1. Recommended Variety: Composite 2 developed by Ghana's Crop Research Institute and Diacol 153, a Colombian variety which has been used in Ghana for the past 5 years.

2. Cultural Practices:

   (a) Method of Cultivation - Land cleared by traditional method. Wherever possible, burning is to be avoided. Incorporate organic matter by hoe cultivation.

   (b) Planting Method - On hilly areas, plant on the contour. In any case, rows or ridges should be two to three feet apart. Sow seeds at two feet intervals at 3 seeds per hill and thin to two when plants are 18 inches high. Alternatively sow on 3 foot ridges one foot apart, 2 seeds per hill. Thin to one per hill when plants are 18 inches high.

18/ The tractors in Cooperatives and Groups are usually owned individually rather than cooperatively.

19/ Information from this section was drawn from Proposal for a Maize Development Project in Ghana, April 1971, MOA and Package Deal Maize Production Scheme, 1972, MOA and ADB.

(c) Weeding - Hoe weeding two weeks after planting followed by cutlass[20] weeding when plants are six weeks old.

3. Planting Time:

a) First Season - Plant early in March with the first rains and never later than April;

b) Second Season - September to early October.

4. Fertilizer Requirements:

In general an application of two hundred weight of 20-20-0 at planting and a side dressing of sulphate of ammonia when plants reach eighteen inches is recommended.

5. Method of Fertilizer Application:

Broad placement or broadcast and hoed in where feasible.

6. Yield:

2,000 - 3,000 lbs. dry shelled grain per acre.

7. Storage:

Shelled grain should be dried to 12% moisture. Store in bags lined with 100 gauge polythene and treat with ethylenodibromide (EDIB).

If a farmer followed the above set of practices he was expected to raise his yield from 4 to 8 bags (16 to 32 bushels) per acre. The increased production valued at $5.85 per bag at harvest time would increase gross income from $23.40 to $46.80 per acre. The cost of production would be raised from $19.50 to $28.86 per acre thus raising profits from $3.90 to $17.94 per acre. It was hoped that this increased rate of profit would leave the farmer in a better position to pay back his loan.[21] With the traditional scheme the profit margin is so narrow that a decrease in yield of twenty-five percent severely affects the farmer's ability to repay.

As mentioned briefly above, the extension service of the Crop Production Division was to assist the ADB in the package program. In particular, 1) the Crop Production Division (CPD) is to recommend eligible participants to the ADB and the Bank in turn is to submit a list of successful applicants to the CPD. The Scheme is to be introduced to participants in the various districts by ADB and CPD officers. The CPD is to undertake measurement of participants farms and compile a list of farmers indicating name of participant, [illegible]ociety, District, measured acreage and location of farm to be submitted to the ADB. The list is to be certified by

20/ Cutlass is the same as a machete or corn knife.

21/ As is the case if the expected profits levels are of the correct magnitude and the variance of yields is not increased appreciably.

the District Crop Production Officer of the CPD. The CPD is to make available at its sub-district depots, fertilizer and improved seed prior to planting operation time.

The CPD is to assure that its field staff give maximum technical advice to participants under the scheme. Inspection of farm operations prior to cash disbursement is carried out jointly or separately by officials of the ADB and the CPD. Cash disbursements to participants are to be certified by an ADB representative and a representative of the CPD.

As can be deduced from the above, the Extension Service of the CPD is to be an integral part of the Package Program. The supervision by the ADB of the traditional scheme participants is restricted to trips to the farm to survey the farm initially and then to inspect the status of the farm before cash disbursement.

Supplies and Sales:

Program Supplies - Improved seed and fertilizer are provided by the CPD. This is true not only for the ADB Schemes but for the entire country. The supplies are distributed to each of the 40 agricultural districts. The farmer then collects the supplies at the sub-district extension office. At present both seed and fertilizer are sold throughout the country at a uniform price which is heavily subsidized. In the case of seeds, it is estimated that the rate of subsidy is of over 50%. The average cost of fertilizer delivered is $5.85 per 112 lb. bag while the government sells it at a price of $2.18. This means that the farmer is in fact, only paying 37% of the cost of the fertilizer.

The CPD also undertakes to transport supplies to Group/Society depots. On the receipt of the fertilizer and improved seed by the participants a waybill/invoice should be signed by the recipient farmer and certified by the sub-district officer of the CPD and a representative of the ADB. Payment for the fertilizer and seed is made by the ADB on behalf of the farmers to the appropriate Regional Crop Production Office.

Other supplies made available to the farmers under the program consist primarily of jute bags for marketing the maize. The ADB purchases the bags from the Bast Fibre Plant at Kumasi and distribute them to these branch offices and farm credit service centers where they are picked up by the farmers. Also, the program includes the provision by the CPD of plastic bags and EDIB capsules for use for weevil control.

The availability of supplies is variable. Often in the past the Government has ordered the fertilizer at a late date so that it arrives in the country late. As a result, a transport bottleneck develops since the fertilizer is needed immediately for application by the farmer. Until the fertilizer distribution system is reorganized there will be difficulties in getting farmers to adopt new varieties.

Seed, also, in the past has been limited due to insufficient funds to purchase the production of the seed growers. In addition, the heavily subsidized price has often made it possible to sell the seed for consumption with an attractive profit. These factors have tended to limit the use of improved seed.

Probably the one single input that has been most inaccessible has been that of institutional credit. The ADB until this year was limited to 5 branch offices and 11 Farm Credit Service Centers. While the commercial banking system has had more outlets than the ADB, they have been extremely reluctant to lend to small farmers due to low cost and excessive risk. There is no doubt that the limited number of ADB offices has thwarted the credit schemes both due to expense and difficulty for the farmer in applying for and receiving a loan as well as the difficulty of supervising the loans.

One problem with the present maize and rice production schemes is that there is no satisfactory way of facilitating and assuring repayment. The farmers after harvesting the crop can sell it immediately or store it and hope for a higher price later. Whenever the farmer sells his crop to a trader he might sell it at his house or possibly the roadside or he might take it to a local rural market for sale.

An alternative choice to the farmer is to sell his maize to the Food Distribution Corporation (FDC) and his rice to government mill. The Government of Ghana at present supports maize and paddy prices. The minimum price for a 220 lb. bag of maize and a 180 lb. bag of paddy is $7.80 22/. As the buying stations are sparse in number and therefore located a considerable distance from most farmers, the effective price to the farmer may be considerably less than $7.80 per bag. The minimum price has often been taken as a maximum price as well and the farmer has been expected to sell at that price regardless of the market price.

Given the price movement over the marketing season in an average year it will usually pay the farmer to store his crop for several months. In an unpublished study 23/ a simulation model was developed to compare the trade-off between the increase in the price of maize and the deterioration of the maize over the marketing season. The paper concluded that on the average it was profitable to store maize for eight months. The Bank has been aware of the benefits of storage and has tried to convince the program participants to store their maize 24/ Originally the Bank required the participants to pay back their loans received in March by December. However, the Bank agreed to extend the repayment period until July of the next year.

22/ The minimum price of maize has been raised recently to $7.80. Since 1969 the minimum price had been $5.46. The minimum price for paddy was set at $6.24 in 1968. It was increased to $7.02 and $7.80 (the latter for C4-63) in 1971 and to $7.80 in 1972.

23/ Henry Hopp, "A Simulation Model for the Financial Return on Farm Storage of Maize" published in Proposal for A Maize Development Project in Ghana. Ministry of Agriculture, April 1971.

24/ Storage of paddy has in fact been discouraged and recently criticized as hoarding. Similar charges have been made of maize storage recently.

The Bank has also given serious thought to entering the storage business. It has developed a scheme whereby it would build maize storage facilities, purchase maize from the farmers at the minimum price, store it until later in the season then sell it at the higher price. After deducting its expenses from the operation the Bank would then pass on any profits to the Group farmer it had purchased the maize from. At present, the Bank has shelved the marketing and storage scheme but it still has a great deal of support since the scheme if successful would enable the Bank to deduct the proceeds from the maize sale to cover the cost of the loan.

Profits and Risks:

As discussed previously a package of improved practices has been developed for both rice and maize. In each instance, the package is expected to result in increased yields and profits per acre. In the case of rice, yields are expected to increase from 5 to 10 bags of paddy per acre with net income projected to rise from $10.37 to $28.16 per acre. The maize package is expected to raise yields from 4 to 8 bags per acre while increasing net income per acre from $3.90 to $17.94 per acre.

From the budget data it would appear that both packages are a significant improvement over traditional practices and should find widespread farmer acceptance. In fact, the rate of adoption of the two packages has been quite different. In 1971, it was estimated that 45% of the rice acreage in Northern Ghana was planted with some combination of improved seed and fertilizer. While comparable data is not available for maize, the general opinion is that the maize package has had difficulty in finding acceptance. It is estimated that from 30,000 to 40,000 acres of maize are fertilized (2-3%) while approximately the same amount of acres are planted with improved seed. In absolute terms, the acreage under some form of improved practice is about the same for rice and maize but in relative terms the rice package has found greater acceptability.

There are several possible explanations for the difference in adoption rates. One reason advanced for the low rate of adoption of the maize package is that Diacol 153 was not as acceptable to the Ghanaian consumer and could only be sold at a discount (10-30%). A second reason advanced is that while the improved seed resulted in higher yields under optimum conditions, the local variety would outyield it under more adverse conditions. A possible explanation for the difference in adoption rates between rice and maize is that the rice budget more accurately reflects reality than the maize budget.

However, to understand the adoption process one must look closer at rice package results. A comparison of the acreages under various combinations of improved seed and fertilizer for Upper and Northern Regions shows that there has been a wide divergence in results even within the rice package (Table 13). The general ecological conditions in Northern and Upper regions are sufficiently similar to suggest that the profitability of the package is not the most important factor involved.

Table 13 - Rice Acreage Under Improved Seed, Fertilizer and Traditional Practices 1971 1/

Practice	Upper R gion	Northern Region	Total
Improved Seed only	1,500	11,000	12,500
Fertilizer only	500	5,000	5,500
Improved Seed and Fert.	4,000	24,000	28,000
Traditional	39,000	18,000	57,000
	45,000	58,000	103,000

1/ Upper and Northern Region only.

Source: Government of Ghana, Rice Development Project Feasibility Report. Volume I, II and III. Ministry of Agriculture, September 1972.

One explanation for the divergence in adoption rates in the rice scheme is the input delivery system. An extension agent who is trying to convince the farmer to adopt a package involving purchased inputs must convince the farmer that: a) the package is economically superior to the traditional practices and b) that the purchased inputs will be available to the farmer when he requires them. It would seem that in Ghana the second factor (b) may be at least equal to the first in explaining package adoption. In particular, the German/Ghanaian Agricultural Development Programme initiated in the Northern Region in 1970 has provided the Northern Region farmers with information on fertilizers as well as assuring adequate and timely supplies. As a result, the problem of fertilizer availability has been minimized. Fertilizer for the Maize Scheme and the Rice Scheme in the Upper Region is supplied by the Ministry of Agriculture. Often the MOA fertilizer has been ordered late and has arrived at sales points later than optimum for farmer use. In the 1972 maize package program, the goal had been 10,000 acres while the actual acreage was 449 acres. One reason given for the poor performance of the maize package program was the lack of inputs at the district and subdistrict level. Other reasons given for the poor performance of the 1972 maize package program was: 1) implementation was late and the program was rushed and 2) credit was late in reaching farmers due to late disbursement.

To summarize, the adoption of improved packages by the farmers is dependent upon: a) the fact that the package is more profitable and b) that input delivery systems exist and are reliable so that the farmer receives the necessary purchased inputs on an adequate and timely basis.

III. Evaluation

A. Objectives of Institutional Credit - Before attempting a preliminary evaluation of the group schemes discussed here, we will attempt to identify the major contributions that might be expected from any institutional credit program. The relative importance of each of the objectives listed below will depend upon the magnitude of the problem in the view of those involved in formulating policy:

1. Help channel funds towards investments with the highest economic rate of return when they would otherwise be placed in less profitable alternatives.

2. Re-distribute income from the urban population to the relatively poorer rural population to achieve a more equitable income distribution and to discourage migration from the rural areas to the ranks of the urban unemployed.

3. Re-distribute income within agriculture to help alleviate or avoid social and political problems.

4. Increase agricultural production to achieve lower consumer prices.

5. Gain political support from the agricultural sector population.

The problems involved in determining the desirable weight to be given each of these objectives will not be discussed here. Rather the focus will be upon the performance of the group schemes evaluated in terms of these objectives and the problems that must be faced if any of these objectives are to be given more emphasis.

B. Performance of the Group Schemes - Unfortunately most of the evaluation of the performance of the credit schemes at this point must depend upon qualitative rather than quantitative evidence. However, even without direct evidence one would expect, for example, that the in-kind credit extended through the credit schemes had an effect upon production. Whether the crop and input mix encouraged as a result of the in-kind credit was optimal is a question left unanswered. The exact utilization of the cash credits under the program is also uncertain.

It is difficult to measure the impact of the rice and maize GFSs on production and farm income. To do so would imply the existence of benchmark data that would enable one to measure changes in farm production and income of the participants. Also, credit is only one element in the agricultural development system and it is unfair to assign the accrued benefits to one particular element of a successful development program. While the effect of the program on production and income cannot be measured one can make general comments about the effect of the program in the two areas.

In the rice area, given the expansion in rice acreage in Northern Ghana over the period 1968-1972 (from 23,000 to 126,000 acres) one can assume that most of the rice cooperative and GFS farmers were growing rice for the first time. Also, given present resource availability and utilization in Northern Ghana, it is safe to say that the majority of the rice acreage expansion has in fact not been at the expense of other commodities. Even though the rice acreage expansion may represent a net increase in production and income to the farmers in Northern Ghana, it would not be accurate to allocate the benefits of the increased production solely to the provision of credit to the farmers. As mentioned earlier the developments in Northern Ghana are not due to any one factor but rather a combination of factors. It is true that credit provision was one factor but equally important were the availability of improved seed and fertilizer, adequate price incentives and the existence of processing capacity. While it is difficult to assess the production and income effects from the program, the effect of the program on farmer adoption of technology does seem more readily discernible. Given the low level of incomes of the farmers in the rice

growing areas it would have been quite difficult for them to have expanded their purchases of improved inputs as rapidly as they did without the provision of credit. Given the apparent profitability of the package it seems likely that farmers would have adopted it but possibly not so many so soon.

In the case of maize it would be easier to measure the net effect of the program on production and income of maize farmers if benchmark data had existed. The lending emphasis of the maize project was on cash loans for labor. As such any direct production or income effects would occur from more intensive labor use per acre or acreage expansion. It is possible that farmers already farming the minimum acreage using family might have held their acreage constant and used the loan proceeds for consumption purposes rather than expansion. On the other hand, a farmer might have held acreage constant but by borrowing from the ADB rather than a moneylender or trader been able to reduce his production cost. However, the fact remains that the impact of the maize program on participating farmers production is unknown. The effect of the maize program on technology at present seems to have been nominal. The reasons for this have already been discussed and will not be repeated here.

The effect of the program on savings, employment and the political and social structure has not at present been significant. The effect of the program on farmers saving habits is unknown. The effect of the program on other lenders has been nominal--the only other lenders to be affected are moneylenders and commercial banks. The commercial banks do not lend to small farmers and large farmers often prefer to borrow from the commercial banks because they are able to get better service from the commercial banks. The money lenders have probably been more effected by the ADB program than anyone but even here, the number of participants is very small relative to number of farmers to be served leaving the money lenders many potential clients.

Also, in the vein of qualitative statements, is a discussion of the image of the credit schemes. Concern has been expressed both within the ADB and outside that farmers have not taken the obligation to repay seriously. Connected with this concern is a feeling that at times loans have been granted under political pressure and/or have been granted without placing sufficient emphasis on the need to repay the loan. In addition, it is a general feeling that the bank has failed to pursue loans defaulters as vigorously as needed to indicate a serious interest in repayment.

C. Evaluation Procedures and Feedback - Operating with a minimum of trained staff is not conducive to careful evaluation and analysis when a program is rapidly expanding. Scattered bits of information have been supplied to the head office, largely at request, on acreages cleared, planted, the use of inputs, etc. more details are available on disbursement, repayment and particularly loans outstanding where the latter is submitted on a quarterly basis. Even then the authors found it difficult to secure a clear picture of repayment rates under the scheme for each year separately.

Correspondence between the branches and the head office indicates that complaints by clients do reach the head office if infrequent. Attempts, however, to respond to complaints appear to be thwarted by the sheer volume of work being handled by the staff.

Problems - The problems associated with the program have been discussed previously but it is useful to summarize them here.

1. Government level - At the Government level the main problem facing the program is the interest rate. The rate is fixed at 6% so that the Bank is not able to cover the cost of giving loans (at present costs are about seven cents per one dollar loaned). Neither is the Bank able to charge differential rates reflecting the costs and risks involved in different types of loans.

2. Agency level - At the agency level the main problems facing the agency are:

a. lack of sufficient outlets to provide effective loan supervision for small farmer loans. As of January 1,1972, the ADB had 16 offices counting the head office in Accra, the branch offices and the FaCSOs. When compared to the 800,000 farmers this averages out to 50,000 farmers per office. In fact the regional distribution varies from three offices in Brong-Ahafo and Upper Region to one office in the Volta and Western Regions. Until the Bank can increase the number of offices and people serving the farmers, it will continue to be difficult to effectively reach a large number of small farmers;

b. lack of a proper loan recording system within the ADB including establishment of a reimbursement schedule for each loan, the separate recording of principal and interest repayment and the updating of individual loan positions. The problem of poor repayment is enhanced by the lack of a proper flow of reporting and accounting information. Management of programs such as the rice and maize scheme require an adequate recording system to stay abreast of the situation and be able to pinpoint problems when they develop not when they are six months to a year old;

c. failure to always provide timely loan approvals and disbursements. One complaint mentioned by farmers was the fact that often they did not know if their loan application was approved until planting time. If a farmer doesn't know the status of his application until it is time to prepare the land and plant, this means that often he must clear land on the assumption he will receive the loan (if the farmer has less than six acres or if he wants to expand his present acreage). This may mean the incurring of substantial expense (as land clearing is labor intensive or costly if done by machine) which the farmer may not be able to meet without the loan proceeds. A second problem is that after the farmer is in the program there sometimes exist a problem of delay in disbursement. This can impose a hardship upon the farmer if he has incurred costs

and has the expectation of repaying them from the disbursement. At least in one recorded instance, the second disbursement in an area (which was to be made after the second weeding) was not available until after harvesting so that the ADB did not disburse the funds at all arguing that the farmers could sell their maize to cover any expenses incurred;

d. No easy collection point for loan repayment. The rice and maize marketing system is such that there is no collection point where the ADB can collect the loans. As a result, the ADB must rely upon the farmers themselves to repay their loans after they have sold their produce;

e. lack of security - not only is there no easy collection point so that the farmers are relied upon to pay their loans after selling the produce but the bank typically has no security to hold as collateral if the loan is not paid. The lack of security is due to several factors; one being that small farmers typically have little in the way of fixed assets to mortgage other than land and two, lands cannot be offered as security since it does not belong to the individual to sell but rather is only his to use.

3. Farm Level - For the farmer, the problems associated with the program have been:

a. Profitability of package: The investigation as to the profitability of the rice and maize packages have been cursory at best. Little information was (and is) known about the packages performance on various soils, different planting dates or how it fits into the existing farming systems. As a result the farmer adopting the package was taking a great many risks as to whether the technology was really profitable;

b. Input delivery system - Not only did the farmers face uncertainty in whether the packages were profitable but there was also the uncertainty as to whether the necessary inputs of seed, fertilizer and credit would be available at the proper time and place in sufficient quantities. The problems mentioned in this respect have already been discussed. It is sufficient to say that from the data available in Ghana, the existence and performance of the input delivery systems seems to explain a great degree of the farmer response to technology given that the package is in fact profitable;

c. Infrastructure - A final point that affects the farmer response to technology and his ability to repay loans is the availability of a transportation and marketing system that enable the pricing mechanism to accurately reflect true opportunity cost of resources. In comparison with the rest of Sub-Sahara Africa, Ghana, has a good transportation network. As a result, market imperfection due to transportation problem, while they do exist, are probably less of a problem in Ghana.

Conclusion:

While credit is an important factor in Ghanaian agricultural development, it is not necessarily the major problem facing the small farmers.

The small farmer in Ghana is faced with the problems of profitability of existing improved technology, inadequate input delivery systems and infrastructures. The farmer is also faced with problems of capital and wealth accumulation due to a family structure that requires those who are successful in acquiring wealth to share it with members of the extended family who are less successful.

For the Agricultural Sector to provide the food and raw materials necessary for continued economic growth and development in Ghana, increased development and usage of improved technology will be required. The increased adoption of improved technology will if it takes place (and if the technology exists) require an expansion in agricultural credit. However, one must keep in mind that not only must the credit be available but so must the inputs to be purchased with the credit. Likewise product and factor prices must be such as to make it profitable for farmers to increasing rely upon the market and adopt the technology. Also, research results must be forthcoming that will provide the increased technology. In the absence of the above factor, agricultural credit has a very limited role to play in fostering agricultural growth and development while if the other factors exist but agriculture credit is not forthcoming, its absence can be a major factor retarding such growth and development.

The present cooperative and Group farming systems for rice and maize have been successful in enabling the ADB to better meet the credit needs of the small farmer. The major changes needed to make the program capable of reaching more farmers and improving the repayment rates of participants are:

1) improvement of data collection and accounting systems to provide better timely and more relevant information on the status of and composition of loans;

2) improvement in loan appraisal techniques so as to better reduce the credit risks in the selection process;

3) more attention be given to national planning/comprehensive commodity programs which would include the proper technology development of adequate input delivery systems for seed, fertilizer, and credit, as well as adequate marketing and transportation systems for the resulting output.

Small farmer credit should be reviewed as one element in a total system in which all of the elements must be included for the system to function properly. As such credit is no more or no less important per se than any of the other elements. Credit at any particular time may take on greater or lesser importance depending upon the functioning of the other elements in the system. The closer the other elements are to functioning efficiently, the more important it is that the credit is available and the more noticeable is the failure of the credit system.

Role of Technical Assistance

AID Inputs - As mentioned previously, the USAID has provided assistance to the ADB. However, this has been general assistance and has not been connected with any particular program, such as the GFS. USAID support has been in three forms: (1) provision of technical expertise; (2) training of participants and (3) P.L.480 Section 104(f) local currency loans to the GOG for re-lending and increasing its equity holding in the bank (Table 14).

USAID assistance began in 1966 with a request from the ADB and GOG to finance a team of consultants to determine whether the ADB should be retained, and if so, its future role and organization. The team completed their study in July 1966. The basic recommendations of the report were: (1) the institution should be retained since it formed a nucleus to start with; (2) agricultural credit must develop within the framework of overall economic policy and planning and be coordinated with other development institutions; (3) the Bank's enabling act of August 1965 should be amended to (a) remove direct political pressure on the Bank, (b) allow for reconstitution of the Board of Directors, (c) remove stock and financial restrictions to allow participation by the private economic sector and other development agencies, (d) make changes in the Bank's administrative organization, including a branch structure and (e) redirect lending policy toward the private and cooperative sectors of the economy and away from financing state institutions. The recommendations of the report have served as the basic policy and organizational doctrine of the ADB.

In December 1966 a USAID OPEX advisor arrived in Ghana to act as a consultant to the Bank for a two-year period. His first objective was to assist in developing operational plans for financing and staffing the Bank and for extending its services to transitional and commercial farmers. He also assisted in the formation and implementation of the branch development policy. The ADB had opened three branches as of 1968 and by 1972 the number of branches had grown to seven. In 1968, the first advisor left and was replaced by a second OPEX advisor who was to be in charge of the Loans Department of the Bank.

The second OPEX advisor arrived in Ghana in January 1969. As head of the Loans Department, the OPEX officer assisted the Bank in loan appraisals and recommendations as well as credit supervision. In addition, the advisor was to help develop the research unit of the Bank to the point where it was an effective division. With the departure of the second advisor in September 1970, the ADB was considered to be firmly established and consequently the project concluded at the end of FY1971.

Table 14 - Summary of AID Inputs (Start FY 66)

(Number of Persons; thousands of dollars; fiscal years)

	1966	67	68	69	70	71	72
I. Technical Assistance:							
A. Technical Tours							
Direct-hire	-	-	-	-	-	-	-
Contract (OPEX)	-	1	1	1	1	-	-
B. Consultants	2	-	-	-	-	-	-
C. Participants:							
U.S.	-	1	2	3	4	3	1
3rd Country	-	-	-	-	-	-	-
II. Capital Assistance:							
A. Grants	-	-	-	-	-	-	-
$	-	-	-	-	-	-	-
L.C.	-	-	-	-	-	-	-
B. Loans				P.L.480		P.L.480	
$	-	-	-	$599,760	-	$2,940,000	
L.C.	-	-	-	-	-	-	-

With respect to providing participant training the USAID had sent 14 Bank officers for study in accounting management, agricultural credit and project appraisal as of June 30,1972. All of the training was in the area of short-courses, with the training in accounting management being organized by Morgan Guaranty and Trust Company; the Agricultural credit training consisting of a month of work experience with the Farmers' Home Administration (FHA) in the U.S. and three-month agricultural credit course at Ohio State University, and the project appraisal training provided by the nine-month course Management of Agro-Industrial Development, organized and given by the Arthur D. Little Company.

In addition to providing advisors and participant training to the Bank over the period FY1966-1971 the USAID loaned to the Government of Ghana(GOG) the local currency equivalent of $3,539,760 from P.L.480, Title I Sales with the understanding that the funds were to be made available to the ADB. These funds were then reloaned by the Bank for various agricultural development projects, including those of small farmers.

Other Donor Inputs

Assistance provided by other donors has been nil in the past. However, as part of the IBRD Sugar Rehabilitation Project, two consultants are to be provided to the Bank for a total of 33 man-months. The consultants consist of a Credit Management Specialist and a Credit Financial Specialist who will review the policies,

procedures and system of financial control in the ADB and recommend any needed improvements.

Effects:

The Group Farming Scheme was developed within the Bank and has been carried out by the Bank without any technical assistance except the general assistance provided by the USAID. Assistance provided by USAID to the Bank was important to the program only indirectly.

Recommendations:

While the ADB has made substantial progress over the past seven years there are still problems to be overcome. As is apparent from the information presented earlier, the ADB has had serious problems with repayments. There are several reasons for the poor repayment not all of which are due to the Bank. Some of the problems include lack of proper loan recording system, understaffing of the ADB offices and the factor that much of the present staff is young and inexperienced.

One way AID or other donor could assist the ADB to resolve these problems is to (a) provide technical assistance to the Bank to review present policies and procedures, identify problems and make recommendations to resolve the problems; (b) provide assistance to the ADB to attempt to estimate future Bank resource requirements for the next 5-10 years and develop a manpower development plan. This plan should attempt to forecast the need for various types of personnel, when they will be needed, the training they will need; and (c) provide assistance in the developing of an agricultural credit training program in Ghana. In particular the course would be developed for Branch and FACSO personnel and would deal with problems of project appraisal within the Ghanaian framework of small farmers and would design criteria for credit worthiness stressing farm growth potential and the use or application of new technology. In addition to problems of project appraisal, the credit training program should include training on the problem of management and organization of offices and records so as to be able to effectively do the job assigned. It may be that such a credit training problem should be developed on a regional rather than a country basis. It would then be possible to bring in agricultural credit personnel from over the West African (or other) regions for such training. Such a course would seem to be more relevant to the needs of the credit institutions than those presently being provided.

With respect to the role of AID in fostering small farmer credit programs, any small farmer credit program must remember that credit is only one aspect of the agricultural development problem. As Mosher points out in his classification of the motive factors of agricultural development, credit is an accelerator not an essential for agricultural development. Too often credit programs are designed and based upon the assumption that credit is the main limiting factor, ignoring all of the other elements of the development problem. In fact, credit may be only one of the factors limiting development and unless an approach is developed that considers the other elements in the agricultural development process such as input delivery systems, markets for the output, an incentive pricing system, transportation, etc., a credit program alone will have little if any impact. It may well be that the role of AID should be to try to discourage small farmer credit programs and instead try to foster integrated rural development programs that consider the problem of

credit in the broader context of the problem of raising small farmer incomes. To the extent that credit is one of the bottlenecks to raising small farmer incomes it should be considered along with the other obstacles. While low income and productivity may be in part due to the lack of credit there are usually other equally if not more serious constraints facing the peasant farmer. What is needed is an approach that considers all of the constraints, identifies the relative importance of each and designs a program that will overcome them.

SPECIAL PAPER

ORGANIZATIONAL STRUCTURE AND ADMINISTRATIVE PROCEDURES APPROPRIATE FOR SUPERVISED AGRICULTURAL CREDIT INSTITUTIONS IN DEVELOPING COUNTRIES

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by:
Daniel Goodman
Organization and Methods Specialist
USAID/Nigeria

Lagos
January, 1973

Organizational Structure and Administrative Procedures Appropriate for Agricultural Credit Institutions in Developing Countries

by

Daniel Goodman*

FOCUS

Given a government's decision to provide agricultural credit to small farmers, some sort of organization is required to manage the lending activities. In developing countries, much emphasis has been placed on government affiliated organizations established to provide supervised credit whereby every phase of farming from soil preparation to marketing can be financed and the lending officers are trained to function as agricultural extension agents as well as credit experts. Government affiliation is necessary as the inherent risks in providing credit to small farmers in developing countries preclude a purely private approach and agricultural development is a critical factor in government development plans.

One constraint placed on such organizations is that they should not compete with commercial banks. This still leaves a supervised agricultural credit institution with wide lending latitude as the land tenure problems in developing countries disqualify even some substantial, progressive farmers from the benefits of commercial bank financing. Another constraint is that funds should be lent to farmers or other agri-business entities (marketing firms, storage firms, processors etc.) where the source of repayment is the cash flow generated by the activities financed. Precluded then is the financing of infrastructure elements such as roads, bridges, research stations etc. Although such elements should be provided concurrently, they constitute social investments which should clearly be beyond the scope of a supervised agricultural credit institution.

Although much emphasis in developing countries has been given to the concept of supervised agricultural credit, the institutions established to provide it have largely met with failure - few have loaned significant amounts of money and collection rates have, in general, been discouraging.

* The observations underlying this paper were made in 1972 while the writer was working as an organization and methods specialist with the Western State Agricultural and Industrial Investment Corporation (WSAIIC) in Ibadan, Nigeria, under a personal services contract with the U. S. Agency for International Development. During this period the writer had the opportunity to gather additional information by visiting the Banque Nationale pour le Developpement Agricole (BNDA) in Abidjan, Ivory Coast and the Agricultural Development Bank (ADB) in Accra, Ghana. Although the observations were made in West Africa, it is believed the requirements and some of the social and environmental considerations are applicable to developing countries elsewhere. The views expressed herein are those of the writer; they do not necessarily represent the judgment of WSAIIC or USAID/Nigeria.

In some instances, the precondition for success, i.e. the existence of profitable agricultural investment opportunities, has been missing. In others, political considerations have outweighed sound investment criteria in dictating the allocation of funds. However, even where profitable investment opportunities exist and political interference is absent, the history of many supervised agricultural credit institutions has been one of failure relative to realistic expectations. In a situation where the objectives of an institution appear reasonable and attainable yet the institution fails to attain the objectives, one would logically suspect that the fault lies with the institutions organizational structure and administrative procedures. The problem then to which this paper is addressed is to design the organizational structure and the administrative procedures of a supervised agricultural credit institution to fit the requirements and constraints imposed by the task at hand and by the social and environmental conditions in which such an institution must operate.

In order to design an appropriate organizational structure and administrative procedures it is first necessary to clearly define an institution's goal and to translate this goal into a specific management objective. Next, since agricultural credit institutions are intimately connected with government, the critical role of government in supporting the achievement of the objective will be discussed. Once these government or external considerations have been reviewed, attention will be focused on internal matters. An examination of the institution's task when justaposed with environmental and social conditions will reveal a number of key problems which must be resolved in order to run an efficient and effective credit institution. The remaining task is to prescribe organizational and administrative solutions to these key problems using management science principles where applicable or in instances where the problems are peculiar to the environment, using prescriptions premised on local research and/or intuitive reasoning.

THE GOAL AND OBJECTIVE

As alluded to earlier, the goal of a supervised agricultural credit institution is to contribute to the development of viable agricultural enterprises within its area of jurisdiction by providing credit and technical inputs to farmers and other entities within the agricultural system. This is rather straight forward. Too often, however, the singleness of purpose dictated by this goal has not been zealously protected. Hence comments on what the adoption of this goal excludes are appropriate. Excluded, of course, is the use of the credit program as a tool for purchasing political allegiance from the rural electorate. Also excluded is the use of the credit program as a social welfare scheme, as a program for subsidizing inefficient borrowers or as a grant programs as the latter should be completely divorced from agricultural credit schemes.

Given the above goal, the objective of the credit institution's management should be to ensure through proper direction and control that the limited funds and technical resources at its disposal are efficiently applied in a manner which maximizes the probability that the funds will be repaid. Although some observers may argue with this objective, preferring a more welfare oriented, liberal approach to agricultural credit, it is the writer's opinion that holding management firmly to this objective has the following advantages:

1. Holding management responsible for maximizing repayments provides a clear-cut, measurable target. To define the objective in a less precise manner as, for example, "to improve the welfare of rural farmers" provides a nebulous target at best and leads to confusion, a lack of discipline and equivocation in management thinking, problems all too common in developing countries.

2. Funds repaid can be relent, funds in default cannot.

Admittedly the fact that a loan is repaid does not necessarily mean that the goal of establishing a viable enterprise has been achieved, although it certainly provides support to this contention. But clearly, one can hardly argue that a loan in default has been successful. More precise measures of success, for example, measures of the increase in production or income which a loan has made possible, require statistical and documentation efforts which for a variety of reasons including the lack of historical data on which to make comparisons, and the lack of marketing data aredifficult to do in developing countries. Thus, due to the connection between a repayment and a successful loan, and the lack of a feasible alternative measure of success, the objective guiding a credit institution's management should emphasize the maximization of loan repayments.

THE ROLE OF GOVERNMENT

The first point to make is that the government must hold the institution's management responsible for achieving the objective. The second point is that a number of government considerations such as the form the institution takes, the manner in which it is funded, its position vis a vis other government agencies, the direction and control it can exercise over its policies, procedures and personnel, its accountability etc. can severly restrict the ability of the institution's management to achieve its objectives and consequently the institution's goal.

It is unrealistic to expect a government connected agricultural credit institution to operate free of political considerations, especially in developing countires with large rural populations. For example in Nigeria's Western State an economic, business analysis of the risk and

and return of various agricultural investments may indicate that the entire portfolio should be devoted to cocoa. However large areas of the Western State are not agriculturally suitable for cocoa so it is certainly reasonable to expect the government to require the credit institution to develop programs to assist the non-cocoa sector. Thus, one finds the WSAIIC and the ADB in Ghana involved in the difficult and risky business of financing food crops. In addition the very successful Credit Soudure program of the Ivory Coast's BNDA, although not specifically focused on agricultural production, is aimed at providing benefits to large numbers of rural farmers. It should be emphasized that even though a credit institution is directed to tackle difficult situations, the management objective of maximizing repayments should not be compromised. It is precisely the more difficult problem which requires uncompromising dedication to the objective.

Even though an agricultural credit institution cannot be truly political, it must be free of clearly undesirable political interference (patronage, nepotisim, the clear misallocation of resources, etc.). It is of course necessary for a government by some sort of enabling act to establish the institution, to lay down the guidelines within which it should operate, to coordinate its activities with other development programs, to provide for funding and to set up procedures for reviewing the institution's performance. But each of these steps should be approached with a view toward protecting the institution from undesirable political or other external interference.

The institution should be a distinct entity, free to run all aspects of its program within the guidelines established. Holding management responsible for achieving the objective will not yield positive results if management does not have authority commensurate with this responsibility.

A suitable way to achieve autonomy is for the institution to be organized along the lines of a private corporation or a limited liability company with the government being the chief stockholder and the management being held responsible for achieving the objective by a government appointed representative board of directors.

Autonomy is particularly critical in the personnel area. The two most important ingredients making up an agricultural credit program are loanable funds and competent personnel. Therefore, the institution should be free to establish its own hiring policies and set up its own employee review, incentive, promotion and disciplinary procedures. Undue emphasis on job security and on seniority rather than competence has no place in an agricultural credit program.

An agricultural credit institution should have sufficient funds to enable it to operate over a long enough time period (three or four years) so that results of the credit effort can be properly evaluated. This can be accomplished by providing sufficient initial capitalization, by annual injections of funds or by linkage to the Central Bank. If the second or third approach is used then to avoid undesirable influences from the funding source and to provide for continuity, the procedures for refinancing should be clearly established.

Undesirable influence must also be guarded against in establishing external review procedures. Objective review criteria based on quantitative information such as loan volume, pay back percentage, loan volume versus administrative costs, etc. should be used. In addition, the review should investigate the synchronization of the institution's activities with those of other institutions. The external review itself should be conducted on behalf of the government by "disinterested" persons, for example, a consulting agency or a group of professionals specifically constituted for this purpose.

Crippling problems can result if the enabling act establishing the institution does not properly define the role and membership of the board of directors. The board should be charged with policy making and internal review responsibilities. It should not be an executive body. The problems that result by allowing decision authority in executive matters to rest with, be usurped by or passed to the board are that the board becomes bogged down in trival matters, no one is held responsible or accountable for the decisions that are made, the whole executive decision process becomes extremely slow and important policy issues are neglected. The board's legitimate control over executive matters should rest with its ability to select and replace, if necessary, the institution's chief executive officer.

Another important function of the board of directors is to represent the interests of the institution to the government. Thus the board should have a dual role, representing the government regarding the effective achievement of the institution's objective and goal on the one hand and on the other, representing the institution in cases where government policies are in conflict with the institution's objective and goal. One way to provide this advocacy role is to appoint a high ranking official of the government's executive branch to the board.

Regarding the composition of other board positions, the desired result is a functional board which can coordinate government requirements with policies and review procedures appropriate for a financial institution operating within the agricultural system. Thus board members should represent not only government agricultural, executive, economic development and financial departments but commercial, financial and farming interests as well.

Even seemingly minor requirements imposed on an agricultural credit institution by government can hamper the institution's effectiveness. For example, the WSAIIC is required to use the Nigerian Financial Year which ends on 31 March. However, 31 March is right in the middle of the heaviest loan disbursement activity and this puts on unnecessary burden on the WSAIIC's accounting staff. This is illustrative of the kind of problems a board charged with an advocacy role can seek to solve.

In sum, the government's role is to support the institution by providing an atmosphere conducive to success. There can be no doubt that there is a direct correlation between the government's degree of success in this endeavor and the success of the institution. The key points are to hold management responsible for results, to provide management with sufficient autonomy and authority to meet their responsibilities and to establish a functional board as the intermediary between government requirements and the institution's needs.

Assuming then that the government has provided the proper conditions for success, we can begin to reconcile the institution's internal structure and administrative procedures with the requirements of the task and the environmental and social situation in which it must operate.

REQUIREMENTS OF THE TASK

The first task is to design the requirements and procedures for granting loans and, equally important, to translate these requirements and procedures into specific operating instructions. It is not the writer's purpose to discuss the selection of investment opportunities or the mix of security considerations, guarantees, loan covenants etc. appropriate for various types of loans except to say that there is still a significant element of trial and error in developing small farmer credit packages. Thus it is incumbent upon the credit institution to constantly review and improve the mechanics and procedures of lending.

There are a number of key variables which affect the viability of any loan. One is the type of loan (i.e. individual, group, cooperative, etc.) Another is the competence of the lending officer who prepared the loan. A third is the type of crop financed and the location of the enterprise. Any attempt to analyze the results of the lending effort should permit the results to be isolated according to at least these three variables. If, for example, loans initiated by a loan officer are on the whole less successful than those generated by his peers, this suggest the loan officer is not performing satisfactorily. If rice loans have poorer repayment rates than maize loans, an investigation into the causes for this can be initiated. A change in the technical inputs for rice growing or more emphasis on marketing assistance may be required. If defaults for individual loans are in general higher than for group loans, this suggests the lending effort should be oriented toward group loans.

As a credit institution cannot begin to effect reasoned improvements in lending procedures without timely feedback information on the efficacy of existing procedures, an inseparable part of the first task is to develop a suitable information system on which research into more effective lending policies and procedures can be based.

In many developing countries it is not uncommon to find over 70 percent of the working population engaged in agricultural pursuits. Thus the second requirement of the task is to filter out from this large population those who appear capable of effectively using credit and technical advice. Although in providing credit to small farmers certain objective selection criteria can be used (bona fide farmer, control of a certain amount of land, etc.), in the final analysis the best security for the lending institution is the integrity of the borrower and this is essentially a subjective assessment requiring judgement on the part of the lending officers.

For those passing the objective and subjective selection processes, a third requirement is to determine the credit and technical requirements by taking into account the needs and payback ability of the borrower. In developing the credit plan it should be mandatory that the lending officer visit the farm or other activity to be financed. To supplement the observations made during the visit, the loan officer must again use judgement in determining the input requirements, potential output and the financial ability of the borrower to effect repayment.

A fourth requirement, which can also be viewed as a constraint, is that loan funds must be disbursed in a timely manner. As the agricultural cycle marches on inexorably, credit for land preparation, planting, fertilizer, harvesting labor, etc. must be available at the appropriate time or else the credit scheme as well as the livelihood of the individual borrowers are put in jeopardy. Experience in Nigeria's Western State indicates that over 90 percent of the supervised credit extended to small farmers is in the form of short term production loans for seasonal crops. Figure 1 superimposes credit activity on the seasonal cycle. From this figure it is evident that the bulk of the production loans must be processed and approved over the relatively short time period from December to February. This, incidentally, reaffirms the importance of ensuring the institution has continuity in funding. Uncertainty about or delays in funding during the processing period can ruin the credit scheme.

Another task requirement is the necessity to provide close supervision to ensure improved agricultural techniques and credit inputs are properly employed. Essentially when an agricultural credit institution makes a short term production loan to a small farmer, the institution is betting that the improved inputs its loan and technical assistance make available will generate sufficient revenues to enable the borrower to repay the loan and to enjoy a somewhat higher income besides. The uncertainties inherent in this "bet" are considerably reduced if closed supervision ensures the credit inputs are properly used and improved farming practices followed.

The final task requirement involves follow-up work to ensure the loan is repaid. It seems to be a universal rule of credit that a loan is not paid back as enthusiastically as it is received and experience in rural lending indicates that borrowers must be personally contacted to encourage and facilitate timely repayments. As shown in figure 1, the repayments season for the majority of agricultural loans coincides with the crop marketing season. Hence repayment follow-up work must be concentrated in the three month period October through December. Personal contact with borrowers to facilitate and encourage repayment presupposes that the borrower has realized sufficient revenue from the sales of his production. Thus, another aspect of repayment follow-up involves assisting borrowers in the marketing function. This is not much of a problem for a number of export crops such as cocoa and palm oil where the marketing channels are usually institutionalized and single channeled. However, it can be a significant problem for food crops as the marketing channels for the latter are far more numerous and diverse. Although lending officers can be given guidlines on how to assist borrowers in overcoming marketing problems, there is no getting around the fact that successful assistance in this area depends heavily on a loan officer's initiative and judgement.

ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

In a developing country, the environmental condition which most profoundly affects the design of appropriate administrative and organizational procedures for an agricultural credit institution is the communication infrastructure. In Nigeria's Western State road conditions are generally poor particularly in the rural areas. Telephones are a luxury item and are almost totally absent outside of major towns. The mail system, although reliable, is slow due in no small measure to the poor road conditions. As a result, information and instructions cannot be rapidly transmitted and acknowledged and information from the rural areas cannot be readily verified either directly or through third parties. Thus the credit institution must design its administrative procedures so that it can effectively control and direct its activities in an environment where the means of communications are poorly developed.

Turning to social considerations, there are several interrelated social problems relevant to small farmer agricultural credit programs. One is the fact that in developing countries, large numbers of the rural population are illiterate. Thus administrative procedures involving borrowers such as disbursement and repayment procedures should be kept simple. However, this should not be allowed to go too far. For example in Nigeria's Western State there are enough rural commercial bank branches to indicate that disbursement by checks is feasible. Disbursement by check

has inherent control and efficiency features. One argument advanced against disbursement by check is that some borrowers may not be able to understand checks even with educational assistance. To give weight to this argument suggests that procedures should be designed to accommodate the least capable potential borrowers. Countering this overly condescending approach is the argument that administrative procedures involving borrowers can and should be designed to encourage the borrowers themselves to adopt more modern administrative procedures. This point will be expanded later in this paper.

A second social problem involves the susceptibility of illiterates to fraud and other dishonest practices. This has contributed to a third problem, that of the farmer's attitude toward government connected credit programs. At least this is a problem in Nigeria where for a variety of historical reasons including dishonest practices, confusing and cumbersome red tape, unfulfilled promises, undesirable political interference, delays etc. some farmers have become skeptical of government promoted credit schemes. Others hold the view that a government credit program is in reality a grant program. These two problems come to a focus at the loan officer-borrower interface. As far as most borrowers are concerned, the loan officer is the credit institution and he therefore must perform accordingly.

Another consideration which will be included as a social consideration for want of a better category, concerns the availability of persons with the skills required to carry out a successful credit program. There are three main categories of skills essential to an agricultural credit program; one being management skills, another being the skills necessary to be an effective lending officer, the third being general administrative skills. Taking management skills first, the shortage of capable managers in developing countries has been well established. The writer's observations in Nigeria indicate that there are two fairly common shortcomings on the part of local managers; one is a reluctance to delegate authority and responsibility, the other is a tendency to avoid decision responsibility by shifting decisions to plural bodies such as a board of directors, a study group, etc. These are poor practices when applied to an agricultural credit program. Refusal to delegate authority unnecessarily limits the scope of credit program to one man's capability. Plural decision making is inherently slow and militates against the running of a credit program in phase with the agricultural cycle. Both these undesirable management tendencies can be overcome by providing managers with the proper conditions of service and incentives. Providing these will be a key consideration in designing the organizational structure and administrative procedures.

Turning to loan officer's skills, training in both agriculture and credit are required. Although foundations in both areas can be laid by appropriate schooling, there is certainly a need for continuing training in both areas as new agricultural techniques and lending procedures are developed. However, proper training is only one of the prerequisites for success as a lending officer. As mentioned in the section on task requirements, there are a number of areas where loan officers must use judgemen and initiative neither of which can be trained or educated into a person. Here again the problem is to provide loan officers with the proper conditions of service and incentives to encourage them to exercise judgement and initiative in the best interest of the institution.

Regarding administra ive skills, the only point to make here is that in designing administrative procedures, due consideration must be given to the capabilities of mid level administrative personnel who have such an important role to play in making procedures effective.

MAJOR OPERATIONAL PROBLEMS

By juxtaposing the requirements of the task with the environmental and social considerations, one can isolate several major operational problems confronting any agricultural credit institution. These problems will be identified in this section. The next sention will recommend an organizational structure and administrative procedures for dealing with them.

Problem 1. Design effective requirements and procedures for granting loans and incorporate these requirements and procedures into specific operating instructions.

From the organizational design and administrative point of view, the major task is to design and ensure the operation of an appropriate information system, i.e. one that provides meaningful and timely information and can be operated by mid-level administrative personnel.

Problem 2. Ensure performance at the field staff borrower interface.

This problem although simply stated is broad in its scope. The borrower screening loan plan development, supervision and collection tasks when juxtaposed with a poor communications infrastructure means that the credit institution must establish a number of field offices, some remotely located, by deploying its loan officers throughout the rural areas. Right away there are control problems for just as the poor communications infrastructure severely limits the conduct of lending activities from a centralized location, it also severely limits the degree of field staff supervision from a centralized location. There are several aspects of this control problem. First, the institution's management must ensure that the field officers are diligently and efficiently carrying out the specific instructions on loan making, supervision, collection etc.

Secondly in those areas which cannot be adequately covered by specific instructions (borrower screening, marketing problems, establishing rapport with borrowers etc.), the institution must encourage loan officers to exercise judgement and initiative in a manner which best contributes to the achievement of the objective. Finally there are control problems concerning the institution's financial resources as well as those of the borrowers. The institution must protect itself and its borrowers from fraud and embezzlement. Unable then due to the poor communication infrastructure, to directly supervise and verify the day to day activities of the field staff, the institution much resort to organizational and administrative procedures to ensure field staff personnel are performing their duties honestly, diligently and efficiently.

Problem 3. Ensure the credit institution operates in phase with the agricultural cycle.

If the institution is going to make a significant impact on the rural environment, it must be prepared to handle a largely short term loan portfolio where the great majority of loans must be processed and approved over a two or three month period. If the institution cannot be assured that loanable funds will be available on a timely basis this problem cannot be solved. Assuming that the government has done its job in this matter, the main sub-problems involve streamlining operations, coordinating interdepartment functions and ensuring that loan approval authority is properly delegated so that the lending program can take on a production orientation.

Problem 4. Develop rapport with the agricultural community.

This problem is placed last as its solution depends upon the solution of the first three problems. The best public relations tool is a successful lending effort. If effective loan packages are developed, the field staff performs honestly and diligently and if borrowers receive their loans in a timely manner and without unnecessary inconvenience, rapport with the agricultural community will be established.

ORGANIZATIONAL STRUCTURE AND ADMINISTRATIVE PROCEDURES

It remains now to suggest an organizational structure and administrative procedures designed to solve these major operational problem. Figure 2 is a recommended organizational chart for an agricultural credit institution and the following discussion will be in reference to it. First the loans department will be discussed followed by an outline of a suitable information system. Next, comments will be made on the accounts, internal audit, personnel and legal departments. Finally the role borrowers can play to assist themselves as well as the institution will be discussed.

The Loans Department:

The first point to make is that the loans departmen is the line department through which the most important work of the credit institution is con ducted. All other departments are support or staff departments whose activities should be designed to support the lending effort.

The loans department structure shown in figure 2 in based on that of the WSAIIC's. A regional office is divided into two, sometimes three sub-areas each having an officer in charge who supervises and coordinates the lending activity of from four to six loan offices. The WSAIIC has the wise policy of having the sub regional officers physicall located at the regional office. Having the sub-regional officers dispersed in the rural reas would greatly compound a regional officer's communications and control problems.

Turning for a moment to loan volume, the WSAIIC's experience indicates that an average loan officer can handle loan inquiries from about 200 individual borrowers, about 60 of whom would qualify and be given loans. The WSAIIC also makes group loans and experience in this area indicates that it takes about three times as long to work up a group loan. Hence average performance by a lending officer would result in 60 individual loans or 20 group loans or some combination, i.e. 10 group loans and 20 individual loans. The point of mentioning these figures is that they have a most important bearing on the institution's loan review and approval procedures. For example, three sub regions each supervising 5 loan officers could generate 750 individual loans. It is barely within a regional officer's capacity to review this number of loans over the two to three month processing season. Going to the next level of the loan department's hierarchy, three regions could produce over 2200 loans; however, it is physically impossible for the chief lending officer to adequately review this number of loans over a two to three month period. The answer to this dilemma is delegation of loan approval authority. This will be discussed later.

For now, the important issue is to ensure field staff performance, and, for this purpose, each double line block in figure 2 should be considered a center of responsibility, that is, the individual occupying that position should be given specific targets and be held responsible for achieving them.

Starting with the loan officers, they should be held responsible for generating a certain volume of loans which reflect the priorities assigned to the credit program (i.e. food crops, cash crops, cereals, etc.). The lending target should be in monetary terms. In addition, the loan officers should be held responsible for the collection of loans they generate. This is most important. By holding one individual responsible for loan generation and collection, one builds in automatic incentives for the individual to do a good screening job, develop sound loan packages, do a proper job of supervision and exercise judgement and initiative in the best interest of the lending effort. By dividing loan making and collecting responsibilities one not only loses these built in incentives,

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one weakens accountability as well as it would be difficult to tell whether a loan in default was bad to begin with or the individual responsible for loan collection has been doing a poor job.

The center of responsibility concept should also be applied to the sub regional and regional officers, each being held responsible for the quantity and quality of loans within their respective jurisdictions. This is logical as their supervisory, training, problem solving, coordination and liaison duties should be directed toward ensuring loan quantity and quality. In addition, these officers should have the authority to make adjustments to meet their lending targets. For example if one sub-region is falling short of its target and another is doing better than expected, the rational officer could reduce the former's and increase the latter's so that the regional target is achieved.

The center of responsibility principle has wider implications when applied to the chief lending officer. Responsibility for the overall quality and quantity of loans means that existing and new lending procedures be trans lated into standard and easily processed forms, that personnel selection and training procedures ensure as far as possible that the field officers are capable of handling their responsibilities, that the morale of the field staff is conducive to good performance, etc. The chief lending officer should be assisted by a staff and it is suggested that it consist of the following:

1. A deputy chief lending officer whose main job is to ensure policies and decisions affecting the loans department are carried out.

2. A statistical/research staff to prepare and evaluate feedback information from the lending effort. This will be discussed further in the next section. Regarding the position of the statistical/research staff within the organization, the writer is of the opinion, although not strongly, that to provide the statistical/research work with a more pragmatic orientation, the staff should be under the chief lending officer. If the institution has a significant mass of data so that the size of the staff becomes cumbersome it should be made a separate department in which case the chief executive officer would be responsible for ensuring the work contributes to the lending effort.

3. A training and information officer whose all important task is to ensure the field staff have up-to-date operating instructions and understand how to carry them out. In addition this officer should have a public relations role, disseminating to the public information on loan volume, new credit programs, procedures for applying for loans, etc.

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The responsibility for the lending programs must remain with the chief lending officer and the most important measurement of his performance is the quantity and pay back ratio of the loans made under his aegis.

Finally, the broadest responsibility and broadest authority over the lending program should rest with the institution's chief executive officer. It is he who must ensure that the proper coordination of the lending, accounting, internal audit, legal and personnel tasks so vital to the success of the credit effort takes place. Interdepartmental coordination is so critical a deputy chief executive officer should be appointed whose main job is to see that it becomes a reality. This officer should have a strong background in accounting, reporting and control; not only financial control but operational control as well. In sum, he should be an organization and methods expert charged with the efficient conduct and coordination of administrative procedures.

Returning to the problem of loan approval authority, it is evident that if the institution makes over 800 loans, more than one individual should have loan approval authority. It is suggested that the following procedure be used to delegate loan approval authority.

First, loan limits should be a policy matter set by the board or other policy making body. Any loan which would exceed these limits would then be referred to the board or other body as approval would necessitate a policy change.

Next, the institution's chief executive officer should have the full authority to approve any loan under the established limits. He should also have the power to redelegate loan approval authority. His incentive to do so will stem from the fact that he will not be able to review every loan if there is a respectable loan volume. Logically then he would delegate loan approval authority up to certain limits and give redelegation authority to the chief lending officer. The chief lending officer, in turn, may find it is impossible to review every loan within his approval limits so he would redelegate some of his authority to the regional officers and the process continues. Delegating loan approval authority does not absolve the delegator from responsibility for the loans within his jurisdiction. It is part of a delegator's job to ensure his subordinates can handle whatever authority is delegated to them.

For the center of responsibility concept to be workable, an information system is required so that performance relative to targets can be monitored. In addition, procedures should be established to reward good performance and discipline substandard performers. This latter requirement will be discussed in the section on personnel procedures. The next step then is to develop an appropriate informative system.

The Information System

To review, an information system should be designed to provide the following:

1. Timely reports on the lending and collection progress at each field office so that management can evaluate the performance of the field staff.

2. Information such as loan volume and repayment rates by loan purpose (rice, maize, cocoa, etc.), by loan term (short, medium or long) and by loan type (individual, cooperative etc.) so that management can effect intelligent improvements in lending procedures.

The basic requirements of an information system are that the relevant data be collected and stored in a manner which allows the data to be rapidly sorted and tabulated for purposes of analysis and report generation. The WSAIIC is presently in the process of setting up a suitable manually operated information system using needle sort punch cards.

For every approved loan there is a borrower file containing the relevant loan information and a ledger card in the accounts department where the disbursements to and repayments from the borrower are recorded. Relevant information from the borrower's file can be combined with the debits and credits to his account by using a needle sort punch card as the borrower's ledger card. Figure 3 shows a needle sort punch card which has been printed to function as a ledger card. The holes around the card's periphery are used to record the relevant loan information. To facilitate the transfer of information from the borrower's file to the punch card a loan file summary sheet is used. Figure 4 illustrates how the information from the borrower's file is transferred to and recorded on the ledger card.

The main feature of this information system is that the ledger cards can be rapidly sorted. By stacking a group of cards, running a tool called the sorting needle through a hole, position 11 for example, and lifting the needle, all the cards with position 11 punched out, that is, all the rice loans will fall from the stack and thus be sorted from the rest. Then by simply using an adding machine, useful information regarding rice loans such as the total acres financed, the total amount lent, total repayments or the balance due could be rapidly tabulated.

With this system, loans can easily be sorted by region, subregion and loan office and appropriate tabulations made. For example, the cards could be sorted and filed by loan office. The cards for each loan office could be further sorted into the months repayments are due so close track can be kept of the repayment progress at each loan office. If repayments appear to be lagging the cards could be resorted by purpose and examined.

It may turn out that repayments against maize loans are satisfactory but poor for rice loans. Hence reasons for poor rice repayments could be investigated.

As the purpose of the information system is to provide management with necessary information, the system should be centralized at headquarters. Because borrower's debits and credits are posted to these needle sort cards, the cards should be maintained by the accounts department. The statistical/research staff mentioned in the previous section should be responsible for selecting and altering, if desirable, the information to be punched on the cards, as it is this system which provides the statistical/research staff with much of the information on which the evaluation and improvement of the lending effort is based. Coordination between the accounts department and the loans department is mandatory if the system is going to work and this is the job of the deputy chief executive officer.

The information system outlined here is very inexpensive as the information transfer and sorting processes are done manually. In addition the system is quite flexible since various types of information can be recorded or punched on the card. Finally the system is simple, requiring only minimal training for the administrative personnel who will maintain and operate it. It appears as though this system will satisfactorily meet the WSAIIC's needs for the forseeable future.

The Accounts Department

As the only source of verifiable financial information, it is vital that the accounts department be structured and operated so that it makes the maximum contribution to the lending effort. In this connection, the accounts department should be held responsible for the following:

1. The clear separation of loan funds from operating funds. Interest earned should be used to cover operating expenses; however, principal funds should be accounted for separately and used only for lending. The accounts department must know at any time the amount of loanable funds available.

2. The timely disbursement of loan funds to borrowers.

3. The timely posting of disbursement and repayment information on borrower ledger cards. The value of the information system as a means for monitoring the activities of the field staff is considerably lessened if posting is allowed to lag the actual transaction by more than two weeks.

4. Providing each loan office with regular reports on the balance due from each borrower.

The structure of the accounts department shown in figure 2 is designed to fit the above responsibilities.

The head, loan funds section is responsible to the chief accountant for the accounting and control of loan funds. Separation of the cashier from the ledger section simply reflects the sound control practice of separating the task of issuing and receiving funds from the task of posting these transactions.

The head, administrative funds section is responsible for the proper accounting of all operating expenditures such as payroll, supplies, rents, maintenance etc. This separation provides a means for controlling the efficiency of field staff activities as operating expenses such as loan officer salaries, office rents, travel expenses, material costs, etc. can easily be allocated to each loan office. The institution would then have a measure of the direct costs involved in operating each loan office, information that would be useful in performance evaluation, control and budgeting. For example, the loan volume versus direct cost for each loan office could be compared. High travel expenses but low loan volume suggests inefficiency or fraud. If new loan offices are contemplated, the direct cost information would provide a good basis on which to extrapolate the budget.

The Internal Audit Department

Because of communications problems, the institution cannot rapidly verify information. Hence, a vigorous internal audit program is needed to verify transactions and information on a random sampling basis. Auditing the procedures at the headquarters level is only a part of the audit task. Internal auditors should spend considerable time in the field varifying information with the borrowers themselves. For example the WSAIIC issues prenumbered receipts to borrowers when repayments are made and copies of these receipts are forwarded to the accounts department. To ensure that the amounts entered on both the borrower's copy and the copy forwarded to the accounts department, agree, internal auditors should, on a random basis, compare the reported repayment with the borrower's receipt copy.

The auditing of field information can be conveniently divided among the individual loan offices. That is, a group of borrowers from a loan office can be selected and the varification of their transactions can proceed simultaneously with an audit of the procedures being followed by the loan officer. In this way files of audit work performed together with supporting work papers can be kept by loan office. Such files would provide another means for evaluating the performance of loan officers. Each loan office should not be audited at the same time each year and, of course, the same auditor should not consistently audit the same loan offices.

A systematic internal audit program must be coordinated with lending and accounting procedures. For example, a change in the method of disbursing funds would most likely necessitate a change in the internal audit procedures. Again it is the deputy chief executive officer's duty to see that the proper inter-department coordination takes place. However, any unexplained discrepancies noted in the audits should be reported directly to the chief executive officer.

The Personnel Department

One of the greatest assets a loan officer can have in meeting his responsibilities is knowledge of the total agricultural picture in his area of operations. This knowledge should include not only technical considerations, such as what can be grown in the area and how best to grow it, but a knowledge of the people involved in agriculture as well. Besides knowing borrowers and potential borrowers, a loan officer should know produce buyers, farm suppliers, extension workers, local bankers etc. Acquiring this knowledge requires time, therefore, it should be an institution policy to leave a loan officer at his post for at least three years provided, of course, his performance is satisfactory. When loan officers are transferred for reasons other than dishonesty, or negligent performance, replacements should be assigned at least two months before the transfer date to permit an orderly complete transfer of knowledge.

To be most effective, the center of responsibility policy should be accompanied by an incentive system, that is, procedures for recognizing and rewarding excellent performance. Three requirements of incentives are that: (1) they only be used to reward clearly superior performance, (2) they be visible so that the recipient's peers can see the rewards for superior performance, and (3) they be meaningful to the recipient.

As the loan officers have a most important and responsible job to do, an incentive system should be set up to encourage them to perform their duties honestly and diligently. Several types of incentives that might be employed either singularly on in combination are:

1. Promotions, although this may be inappropriate for some as they may not be eligible or "in the some" for a promotion.

2. Salary increases without promotion; however, these must be separate and distinct from normal annual pay increases.

3. Extra paid leave, This would seem to be an attractive possibility as there are periods during the year when agricultural lending activity is not too active.

4. Special schooling or training;

5. A cash bonus. It would seem that a relatively small cash bonus, say US $30 to $60 tied to a specific measure of performance, for example, loan recovery percentage, would be very effective and economically sound.

6. Formal recognition by the chief executive officer. This should be done in all cases.

In evaluating performance one must take into account circumstances beyond the control of the employee. For example a crop failure due to natural causes would most likely have a detrimental effect on loan repayments. However if a loan officer has obtained a high repayment rate on loans unaffected by the failure, his performance could still be considered excellent.

The Legal Department

The legal department is, of course, responsible for taking legal action if necessary to recover a loan. The point to make here is that there may be a tendency for loan officers to devote less attention to a secured loan than to an unsecured loan, the reasoning being that the institution's loan can be recovered one way or the other. However, the objective of the lending effort is to recover the loans from the cash flows generated by the enterprises financed. It is this form of repayment which management and lending officers should be held responsible for. Any loan which requires legal action to collect should be considered unsuccessful.

The Borrower's Role

There are a number of areas where the institution and the borrowers can mutually assist each other. For example disseminating to community leaders, rural banks, extension workers and potential borrowers an information brochure which describes the requirements and procedures for obtaining a loan should permit borrowers to make advanced preparations and thereby facilitate loan processing. In addition public knowledge of lending procedures would discourage a loan officer from unscrupulous deviations from these procedures.

Other areas of mutual benefit are concerned with facilitating administrative procedures, and a key business practices program could be used to take advantage of these.

As a condition for a WSAIIC loan, farmers are required to subscribe to certain key farming practices. As a parallel to this, borrowers could be required to subscribe to a set of key business practices. Commercial farming is first and foremost a business and borrowers should be encouraged to develop sound business practices as well as modern farming techniques.

The key business practices should be designed to fit the borrower's level of sophisitication. Several key business practices all borrowers should subscribe to are:

1. That no cash payments to the institution or its authorized representative will be made unless an official receipt for the amount paid is issued at the time of payment.

2. That official receipts from the institution and receipts for purchases made under the farm and home plan will be maintained by the borrower in a safe place.

3. That records of the crop yields from the farming enterprise including the yields used for home consumption will be kept.

4. The records of the amount of revenue realized from the crops will be kept.

The above 4 points would seem to be about all one could expect from an illiterate borrower. For a literate borrower the Corporation could require, in addition to the above, that:

5. The borrower maintain a checking account for loan funds and record the payee and amount of each check written.

6. That revenues received from the farming enterprise in excess of the borrowers immediate cash needs be deposited in a bank.

7. That loan repayments will be made by means other than cash (postal money order, bank draft, personal check, etc.). Cutting down and perhaps eventually eliminating cash transfers in the field would ease the institution's administrative and control problems.

That the key business practices are being followed should be monitored by field staff personnel as well as by the internal auditors. Should a borrower fail to follow the key business practices, he should be accorded the same treatment as one who fails to adhere to key farming practices.

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Some may feel the above practices are expecting a bit too much from borrowers. However, it would appear that for some time to come the resources of agricultural credit institutions relative to the potential demand will be quite limited. The interests of loan quality when juxtaposed with limited resources in the face of a large demand means the institution can and should be quite selective in its investments. In the selection process a borrower's business potential as well as his farming potential should be considered.

SUMMARY

It remains now to show how the various recommendations tie together to solve the major operational problems. It is assumed here that the government's role is being played satisfactorily.

Problem 1. Design the requirements and procedures for granting loans and incorporate these into specific operating instructions.

Solution:

A. Hold management responsible for achieving the objective. This provides incentives to do a good job of loan package design.

B. Design and operate a centralized information system.

C. Establish a statistical/research staff to analyze the efficacy of existing loan programs using the information system as a research tool and data base.

D. Establish the position of training and information officer within the loans department and hold the incumbent responsible for translating lending procedures into operating instructions.

Problem 2. Ensure performance at the field staff borrower interface.

Assuming the institution has control over personnel selection, promotion, incentive and disciplinary matters, the solution would call for it to:

A. Set specific lending targets for each loan office.

B. Hold loan officers responsible for the quantity and repayment of loans they generate.

C. Carry the center of responsibility concept throughout the loan department right to the chief executive officer. This gives superiors the incentive to exact performance from subordinates.

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D. Establish a continuing training program through the training and information officer.

E. Use the centralized information system to monitor field staff performance on a timely basis.

F. Set up an incentive system to reward good field staff performance.

G. Hold the accounts department responsible for timely posting debits and credits to borrowers' ledger cards.

H. Establish a key business practices program as a means for discouraging fraud.

I. Publicly promulgate a brochure outlining the steps required to obtain a loan. This also should help discourage fraud.

J. Require internal auditors to confirm on a sampling basis transactions directly with borrowers.

K. Install a direct costing system for operating expenditures to ensure operating expenses are being efficiently spent.

L. Establish the policy of leaving loan officers at their post for at least three years, provided performance has been satisfactory.

Problem 3. To ensure the credit institution operates in phase with the agricultural cycle will require it to:

A. Ensure continuity of funding.

B. Establish a functional board making a clear distinction between its policy and review functions and the executive functions of the chief executive officer.

C. Ensure proper interdepartmental coordination by holding the chief executive officer responsible for loan quantity and quality. Again this is an incentive device; if interdepartment coordination is lacking loan quantity will surely suffer.

D. Appoint a deputy chief executive officer responsible to the chief executive officer for interdepartmental coordination.

E. Delegate loan approval authority to ensure a production orientation in the loan approval area.

F. Translate lending procedures into operating instructions and conduct a continous training program through the training and information officer. Confusion as to what to do and how to do it causes delays.

Problem 4. Develop rapport with the agricultural community.

A. Mount a public relations effort through the training and information officer.

B. Solve problems 1, 2 and 3 above.

The very existence of an agricultural credit institution is predicated on the assumption that if credit programs are properly designed and operated, farmers and other borrowers will respond positively. It is the writer's opinion that this assumption is valid; that past failures of agricultural credit institutions are not due to borrower recalcitrance but to the failures of government and managers to establish and operate the credit institutions properly. It is hoped that the ideas expressed in this paper will contribute to the solution of this problem.

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FIGURE I

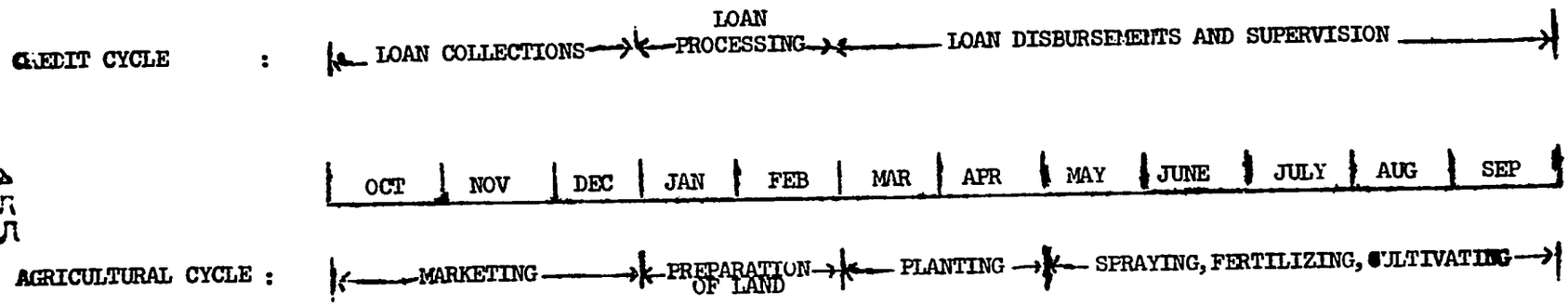
CREDIT CYCLE :
LOAN COLLECTIONS
LOAN PROCESSING
LOAN DISBURSEMENTS AND SUPERVISION
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUNE
JULY
AUG
SEP
AGRICULTURAL CYCLE :
MARKETING
PREPARATION OF LAND
PLANTING
SPRAYING, FERTILIZING, CULTIVATING

FIGURE 2

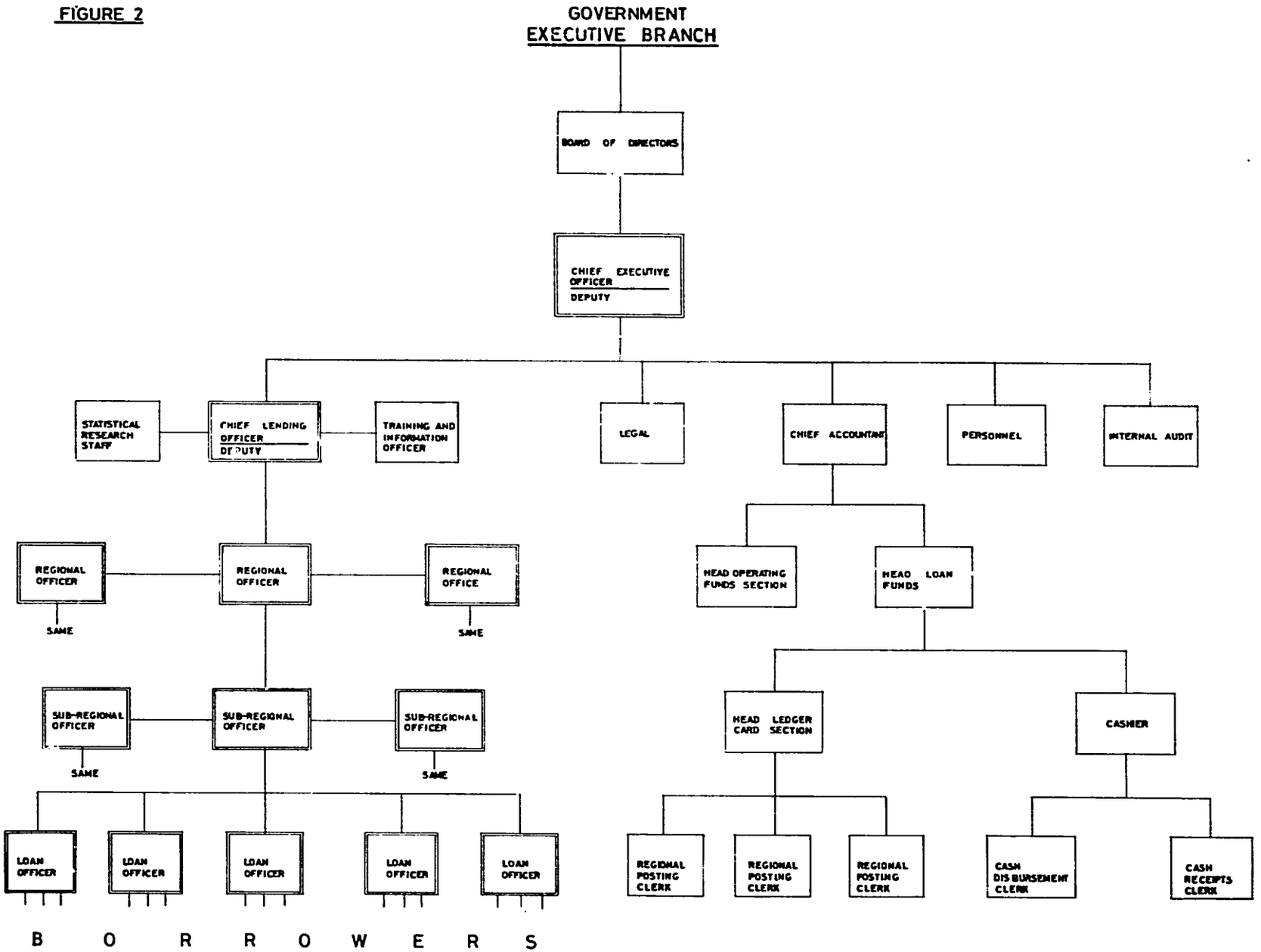
GOVERNMENT
EXECUTIVE BRANCH
BOARD OF DIRECTORS
CHIEF EXECUTIVE OFFICER
DEPUTY
STATISTICAL RESEARCH STAFF
CHIEF LENDING OFFICER
DEPUTY
TRAINING AND INFORMATION OFFICER
LEGAL
CHIEF ACCOUNTANT
PERSONNEL
INTERNAL AUDIT
REGIONAL OFFICER
SAME
REGIONAL OFFICER
REGIONAL OFFICE
SAME
HEAD OPERATING FUNDS SECTION
HEAD LOAN FUNDS
SUB-REGIONAL OFFICER
SAME
SUB-REGIONAL OFFICER
SUB-REGIONAL OFFICER
SAME
HEAD LEDGER CARD SECTION
CASHIER
LOAN OFFICER
LOAN OFFICER
LOAN OFFICER
LOAN OFFICER
LOAN OFFICER
REGIONAL POSTING CLERK
REGIONAL POSTING CLERK
REGIONAL POSTING CLERK
CASH DISBURSEMENT CLERK
CASH RECEIPTS CLERK
B O R R O W E R S

FIGURE 3

BORROWER: _____

ADDRESS: _____

LOAN NUMBER: | | | | | | | | | | |

LOAN AMOUNT: | | | | | | | | | | |

NO. IN GROUP: | | | | | | | | | | |

PUNCHER: _____

CHECKER: _____

SPECIAL REMARKS: _____

CROP ACRES

DISBURSEMENT GUIDE

Date						
Amount						

REPAYMENT SCHEDULE

Date									
Amount									

Date	Reference	Amount	Principal	Interest	BALANCES Principal	Interest	Total

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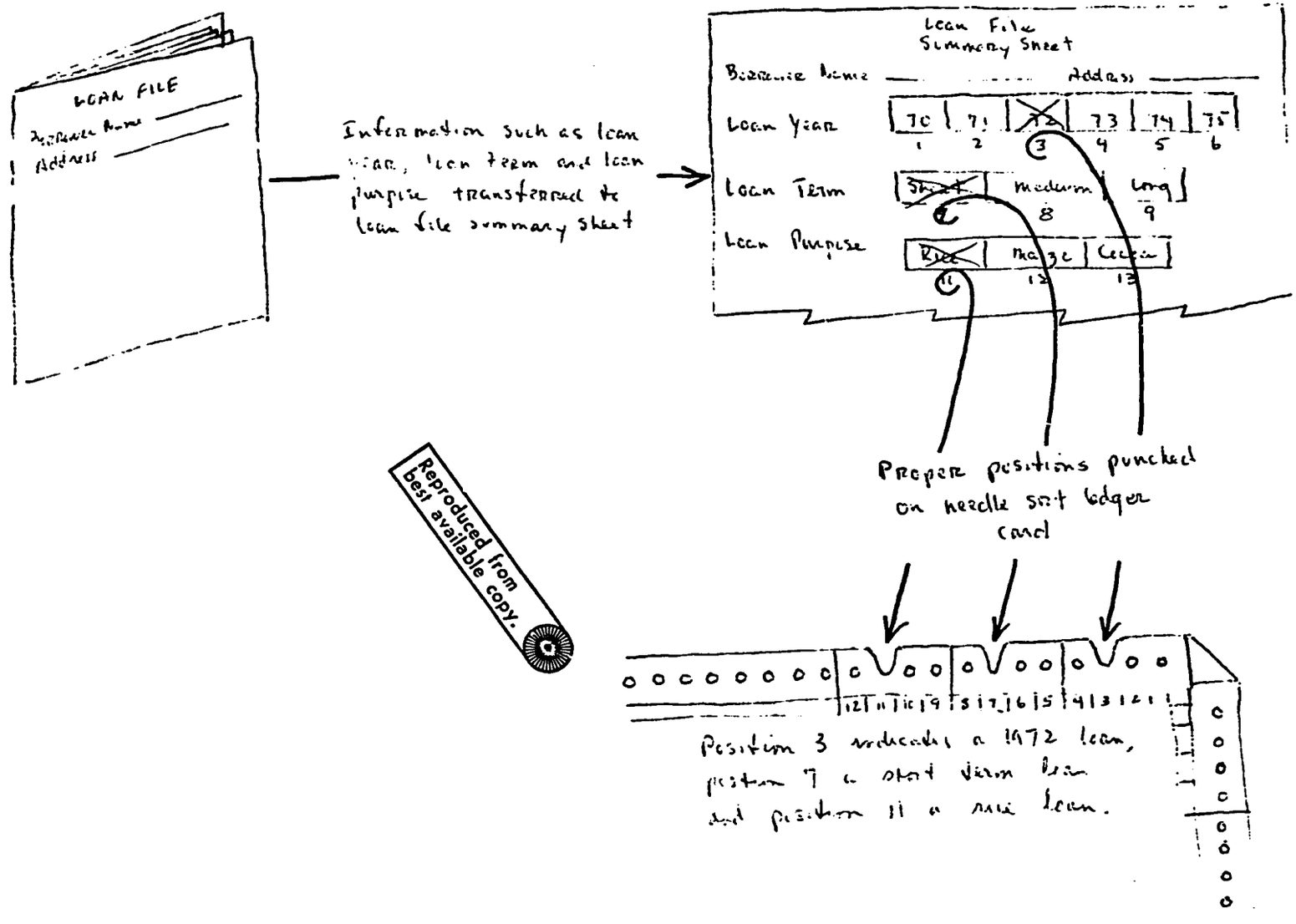
FIGURE 4



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COUNTRY PROGRAM

GOVERNMENT SMALL FARMER CREDIT PROGRAMS IN MOROCCO

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by:
Norman Ulsaker
Food and Agriculture Office
USAID/Morocco

Rabat
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PREFACE

This paper attempts to describe and compare two small farmer credit institutions in Morocco. I have followed the AID country paper outline closely even though a revised outline may have been more suitable in discussing the two institutions. Nevertheless, a few subheadings were left out and sections combined for the sake of simplicity.

Information does not exist to answer many of the questions for which the outline sought answers. Particularly frustrating was trying to find evidence showing whether or not credit is crucial to small farmer progress. Plans for a sample farmer survey to obtain information on production, income and employment effects of credit had to be abandoned due to lack of time and resources.

Mr. M'hamed Hanafi and Mr. Hamido Bouyayachen, USAID Rabat, gave major assistance in obtaining information for this paper. I am also indebted to officials of the CNCA and SOCAP, especially Mr. Tahar El Mesmoudi, Inspector General, CNCA, and Mr. Moulay Abdelhakim Saissi, Director, CLCA, for their helpful cooperation. Finally, the review and constructive comments by USAID staff were especially appreciated.

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SUMMARY

There are two government credit organizations in Morocco serving the small farmer -- the "Société de Crédit Agricole et de Prévoyance" (SOCAP) and the "Caisse Locale de Crédit Agricole" (CLCA). SOCAP represents the old traditional pre-independence institution which, for the most part, services the subsistence credit needs of small traditional farmers. CLCA has, up to mid-1972, served the more progressive small and medium sized farmers. Although subsidized by the Government, it operates on a business basis under the management of the "Caisse Nationale de Crédit Agricole" (CNCA).

SOCAP traces its origins to 1928 and has remained relatively unchanged in its organization and functions for the past 20 years. As a government established society, SOCAP is simply a collection of local chapters and has neither a corporate nor cooperative structure. There are 93 individual SOCAP organizations distributed over the entire country. Its farmer members have little or no participation in its management or operation since these are carried out by local governmental authorities as a part of their regular duties. External financing is obtained from government capital transfers based on a surcharge on rural taxes. Limited redistribution of income, therefore, takes place since low income SOCAP members do not pay taxes. A very poor repayment record has eroded available funds and volume of credit has greatly decreased over the past ten years. In past years, up to 400,000 farmers per year have received credit from SOCAP. Present numbers are estimated at 200,000 or about 15 percent of all small farmers eligible for credit. Typical loans are short term and very small -- less than $40. Such loans do little to lift the farmer above a subsistence level of production.

The CLCA was established in 1967 as a subsidiary organization to the National Agricultural Credit Bank (CNCA) established in 1962. The Bank manages the CLCA and the Government makes up any operational losses. Since its establishment, the CLCA has obtained government grants totalling $13.4 million to finance an expanding credit program. The CLCA has opened 53 local offices throughout the country during the past five years and has more than doubled volume of credit and number of farmers served during that time. The CLCA presently makes loans to about 20 percent of farmers eligible for its credit. There has been an excellent record of repayment -- over 95 percent during recent years -- due to careful screening of clients, not giving excess amounts of credit, and requiring good security against the loan. Most of the credit has been medium term (3 to 5 years) in contrast to the predominantly short-term nature of SOCAP loans.

An estimated 40 to 50 man-years of technical assistance, mostly French, has been given to the CLCA's parent organization, the National Agricultural Credit Bank, during the past ten or more years. An undetermined amount of short-term consulting assistance has also been given by the IBRD. USAID provided an agricultural credit advisor from 1962-1966. Expatriate credit officers were gradually phased out of the Bank staff as Moroccans were trained. The Bank became Moroccanized in 1971. Training of Bank staff is given in-country as well as in France and the U.S.A. assisted by a number of bi-lateral and international organizations. The above assistance has no doubt influenced the organizational structure and credit policy of the Bank.

The following capital assistance has been received by the Bank: IBRD - $10 million loan in 1965 and $24 million loan in 1972; IDA - $10 million loan in 1972; Kreditanstaldt (German Development Bank) - $3 million loan in 1972. USAID has loaned $3 million in local currency (Title I) for a special cereals production program fund administered by the SOCAP.

Both the SOCAP and CLCA programs have suffered from lack of technical supervision of loans. Coordination in the development of production credit between research, extension, and the credit organizations has also been weak.

Empirical evidence on the effect of SOCAP and CLCA programs on productivity, employment, and incomes of small farmers is limited. However, informed agriculturalists in Morocco consider that government credit is crucial to small farmer progress. This is because there is not enough savings or capital formation among the small-holder to finance the investments needed for modernization. In addition, private sources, including merchants and money lenders, have reduced their credit activities in recent years and usually confine their lending to consumption purposes.

The prospects for substantial gains during the coming years from an expanded program of supervised credit are excellent. Good markets, a rich resource base, and well developed infrastructure exist. The modern farm sector demonstrates what can be done with capital and know-how. Certain profitable technologies have been developed which can be transferred to the small-holder with little or no loss in efficiency.

The following are needed to improve the small farmer credit program:

1. Assistance in the development of cooperatives which would simplify the logistical problem of serving the mass of small farmers and give them a tool to use credit efficiently for self-improvement.

2. Base loans on the increased productivity of the investment financed rather than on security, even if this requires 100 percent financing.

3. Improve evaluation procedures within the Bank to assist planning and better allocation of human and capital resources.

4. Integrate more closely agricultural research, extension and credit organizations.

5. Recruit and develop an elite corps of farm financial planning and management specialists who would augment the technical extension service staff.

The Government has established plans to phase out the SOCAP and bring all small farmers under the CLCA in the next four years. The question is -- will this organization be instrumental in helping to transform and modernize the mass of small traditional farmers it will inherit as clients? To accomplish this, the CLCA will have to relax in some measure its present conservative banking manner and acquire a more development-oriented policy. As a young and dynamic organization, the chances of its doing this appear good.

I. INTRODUCTION

In Morocco, agricultural credit has developed and evolved to service two highly different sectors - the traditional and the modern. The bias has been in favor of the market-oriented modern sector.

The modern farm sector contains most of Morocco's irrigated land. Irrigation, combined with the use of modern equipment and farming techniques, makes possible a high level of productivity and a broad range of outputs. The products include a great variety of fresh fruits and vegetables; citrus for export and domestic use, and virtually all the industrial crops.

In contrast, the traditional sector is based essentially on dryland production of cereals and livestock. Farming methods are rudimentary. Animal power and the wooden plow are widely used. Moreover, traditional farming methods have depleted the soil in many areas. Plots are frequently too small to be economically viable and under-employment is endemic. Productivity is low and the largest portion of output is consumed on the farm.

A dual economy is characteristic of many countries. In Morocco, the problem is especially serious because of the relative importance of the traditional sector comprising approximately 80 percent of all cultivated land and nearly all of the grazing land. In terms of output, the traditional sector produces about 75 percent of cereals, nearly 95 percent of total livestock output -- and very little else.

The potential for Moroccan agriculture is extremely promising. Morocco covers an area about the size of California with very similar climate and probably better soils. Furthermore, it is well situated with respect to European markets. Currency is widely used even in remote local markets and the modern urban sector has been served for many years by a highly developed banking and credit system. However, the majority of rural Moroccans do not use banking institutions. Savings are invested in jewelry, livestock and land. Borrowing is mostly for subsistence rather than for investment purposes.

Following independence (1956), three monetary systems -- French, Spanish, and the free money market in Tangiers -- had to be integrated into one, and a new central bank created. This bank, created in 1959, acts as the sole issuer of currency, administers foreign exchange reserves, acts as financial advisor and agent for the Government, and controls the banking system. Its link to the agricultural credit system is through re-discounting services to the national agricultural credit bank and advancing funds on an interest free basis to the local credit societies which provide subsistence credit to small farmers.

The "Caisse Nationale de Crédit Agricole" (CNCA is the sole Government credit institution serving commercial agriculture in Morocco. Private banks, trading companies, and merchants finance a few of the larger farmers. Their role has been declining during recent years with the expansion of CNCA operations.

As the major source of credit to small traditional farmers, the "Société de Crédit Agricole et de Prévoyance" (SOCAP) has been more of a factor in alleviating welfare and hardship cases than in increasing agricultural productivity. 1/

The 1961 laws establishing the CNCA, provided for local branches "Caisse Locale de Crédit Agricole" (CLCA), which would eventually replace the SOCAP.1/The first group of local branches was established in 1967. The present total (1972) is 53. Until 1972, these local branches served largely the medium farmers and a few modern and small farmers. Replacement of the SOCAPs began in 1972 and will be phased out over a 4 year period. Consequently, the CNCA is just beginning to reach down to service the credit needs of the mass of small and traditional farmers.

The Government of Morocco has paid limited attention in the past to the small farm sector. Recently there have been signs of more concern for actions to assist the small-holder. Credit programs are only one aspect of agricultural development; but an important one in view of the meager proportion of eligible farmers reached -- less than 20 percent -- and the lack of private sources of financing. Thus far, the Government has allocated a major share of financial and technical resources to the development of large irrigation zones in contrast to dryland areas. Many other development areas compete for scarce government resources: infrastructure, marketing, research, extension, education, and planning. Infrastructure, and to a somewhat lesser extent, marketing, are well developed. Improvements in research, education and extension lie more in their administration and coordination than with the amount of resources allocated to them. Planning should have as high a priority as credit. However, the means for improving the agricultural planning processes would involve limited resource transfers. Well-programmed small farmer credit would directly complement the above areas, and especially in the short run, should yield high returns on marginal capital invested. The Government is beginning to recognize that insufficient attention has been given to income distribution and employment aspects of development. Its recent decision to replace the SOCAP with an expanded small farmer credit program by CLCA is a demonstration of this concern.

1/ For the sake of convenience, both SOCAP and CLCA are generally referred to in the singular sense.

II. PROGRAM CHARACTERISTICS

A. Background

1. Historical Summary

Prior to the establishment of the National Agricultural Credit Bank (CNCA) in 1962, agricultural credit in Morocco had been poorly organized, complex and fragmented. Commercial Banks and some Government institutions provided credit to larger farmers, agriculture companies, and cooperatives. Small farmers obtained small amounts of credit, (largely short-term) from government-sponsored credit societies, (SOCAP) established in 1928. After Independence (1956), merchants and later commercial banks reduced their agricultural lending as political uncertainty increased. Government institutions were plagued by an increasing shortage of funds and poor repayment records which further reduced lending capacity. The resulting breakdown in agricultural credit forced the Government to scrap most of the existing institutional credit system and establish a unified National Agricultural Credit Bank (CNCA).

In 1967 the CLCA was set up by the Government, as a subsidiary to CNCA, to better serve the medium and smaller farmers and eventually to replace the SOCAP. This began in 1972.

Via the local offices of CLCA (53) and SOCAP (93 societies), the entire country is potentially served by governmental credit. During the past ten years, there have been problems but also progress in increasing amounts of credit to commercial farmers. The major task of the agricultural credit system remaining is that of effectively serving production credit needs of the mass of smaller and traditional farmers.

2. Relation to National Credit System

Commercial banking in Morocco is regulated by 1967 decree, administered by the Minister of Finance through the Central Bank (10, annex 2). There are 18 commercial banks and some 8 specialized institutions for financing industry, agriculture, tourism and commerce. At the end of 1971, total outstanding bank credit was $716 million of which about 70 percent came from commercial banks and the rest from specialized institutions.[1/] Credit to agriculture accounted for about 17 percent of this total. CNCA has rediscount privileges with the Central Bank up to $24 million for its own seasonal operations and a further $2.2 million for CLCA at 3% a year interest. It can also rediscount with the "Caisse de Dépot et de Gestion"[2/] up to $7.6 million

1/ Throughout this report, all money values in Moroccan Dirhams have been converted to dollars at the rate of 5.00 Dirhams to one U.S. dollar.

2/ This is a specialized Government bank holding and investing cash reserves of public funds and enterprises.

at 5.5% interest. It has up to now. no access to the local monetary market. The Central Bank charges no interest on funds advanced to SOCAP since these are operating mainly as a welfare program for small farmers. No data is available on the current volume of credit through dealers, moneylenders and merchants. At the end of 1971 the outstanding credit to agriculture for production and marketing purposes, through CNCA and the commercial banks, was about $130 million, of which about 73 percent was seasonal. CNCA's share of this credit was about $74 million, or 57 percent, of which just over half was seasonal.

3. Other Program Activities

Neither the SOCAP nor CLCA have direct responsibility for other rural development programs. Although their stated objectives include the development of cooperatives, this is being done by the Agricultural Development and Extension Service of the Ministry of Agriculture.

4. Relation to Pre-existing Local Institutions

Prior to 1961 and the formation of the agricultural credit bank, CNCA, several programs designed to furnish Moroccan farmers with credit had been in existence for many years. These institutions operated independently and without any coordination with one another. These included the agricultural credit societies -- SOCAP, the "Caisse Centrale de Crédit et de Prévoyance" and "Caisses Régionales d'Epargne et de Crédit", established by decree in May 1937; the "Caisse Fédérale de Mutualité Agricole", created by Dahir of August 1935; and the "Caisse Générale de Crédit de Tétouan", created by ordinance in August 1942. Except for the SOCAP, the present structure of credit represents a complete reorganization of the above. The CNCA began as a completely new organization, although many of the personnel came from the former credit organizations.

5. Agricultural Patterns and Potential

Morocco had a population of 15.4 million in 1971 (census), of which approximately 70 percent depends on agriculture for a livelihood. The Moroccan Government estimates that the population is growing at a rate of 3.0 percent a year (U.N. estimates show 3.4 percent). Over half of the total population is living at near subsistence level with a high degree of unemployment and underemployment.

Illiteracy in the rural areas is possibly 90 percent. There has been heavy migration of the rural population to the urban areas. In spite of this, the rural population is estimated to be growing at the rate of about 200,000 per year. No precise figures are available, but the average annual income in rural areas is believed to be well below the national average of $240 per capita (1971).

Agricultural production accounts for about 30 percent of the total gross domestic product and for half of total export earnings. From 1963 to 1970, agriculture grew at the rate of 2.8 percent a year as compared with 3.6 percent for the overall economy. This slower growth rate has been largely due to the lack of response in the traditional cereals and livestock sub-sectors.

Morocco has a land area of somewhat over 40 million hectares of which about 8 million hectares are cultivable. Of this area, in a given crop year, approximately 60 percent is in cereals, 3-4 percent in legumes, 5-7 percent in tree crops and 25-30 percent in temporary fallow.

Uneven distribution of land ownership and complex tenure patterns characterize Moroccan agriculture. (See Appendix tables A-1 and A-2). Approximately 50 percent of all land was held by 7 percent of owners in the early 1960's. On the other hand, 60 percent of the farmers have one hectare or less with over half of these farmers having no land at all.

Redistribution of land and resettlement of farmers is taking place, albeit on a modest scale, (3 and 21). Additionally, the Agricultural Investment Code of 1969 contains provisions for agrarian reform.

In 1966 a former USAID credit advisor estimated that about 90 percent of Moroccan farmers did not have sufficient physical and technical resources to be able to benefit from credit (16, p.3). On the other hand, an earlier credit advisor reported that traditional farmers having capability to use supervised credit effectively to increase their productivity and incomes represented the largest segment of the rural population in Morocco (9, Tyson, p.25). The former estimate may be valid under the assumption that existing farming systems are followed -- cereals fallow culture. Farmers having less than five hectares of land will have to intensify through irrigation, high return crops, multiple cropping, or integrated livestock enterprises.

B. Objectives

1. General Objectives

The principle stated goals of SOCAP are to:1/

(1) Assist their farmer-members in improving their production through use of credit in either money or kind.

(2) Assist in agricultural programs which extend improved crop and livestock practices to farmers.

1/ Note: Refer to table 1 for a summary comparison between the two credit organizations - SOCAP and CLCA. (pp. 12 & 13)

(3) Support efforts by farm families in carrying out property improvements.

(4) Protect the farmer members from usury and monopolistic practices.

(5) Participate in the development of cooperatives which would assist their farmer members.

(6) Provide collective insurance against natural catastrophies affecting agriculture.

(7) Provide emergency financial assistance to members in dire need because of sickness, accidents or other misfortune.

(8) Assist in the social welfare and development of the rural areas.

The objectives of the CLCA coincide with those of its parent organization, the Agricultural Credit Bank -- financing the development of agricultural resources and assisting farmers in modernization and increased productivity. The organization agrees to assist individual farmers and agricultural organizations to:

(1) Increase savings in rural areas.

(2) Develop associations having as their goal agricultural cooperation.

(3) Mobilize investment or venture capital.

(4) Reduce credit costs of buying land and equipping farms.

(5) Increase land ownership by farmers.

(6) Develop processing and marketing facilities.

According to available information, official or stated objectives of both organizations have not shifted during the past ten years. In general, the objectives tend to conform to national priorities.

Apparent objectives: A number of the stated objectives under both the CLCA and SOCAP have been implemented either partially or not at all. SOCAP has tended to emphasize objectives (6) through (8) above to the detriment of objectives (1) through (5). Only during the past two years have efforts been made by the Bank to mobilize rural savings. The organization has not made any moves thus far in tapping the domestic money market for investment capital. Neither SOCAP nor CLCA has made a concerted effort in promoting the establishment of true farmer cooperatives; although Bank credit is assisting the establishment of agrarian reform cooperatives, under the Ministry of Agriculture.

TABLE 1- A COMPARISON BETWEEN TWO SMALL FARMER CREDIT ORGANIZATIONS IN MOROCCO (mid-1972)

	Société de Crédit Agricole et de Prévoyance (SOCAP)	Caisse Locale de Crédit Agricole (CLCA)
Year Established	1928	1967
Organization		
Structure	Collection of local credit societies; no regional or central offices	Subsidiary of National Agricultural Credit Bank, corporate structure
Character	Emphasis on welfare and emergency assistance besides subsistence credit	Production credit; induce savings (parent organization)
Beneficiaries		
Target	Non-tax paying small traditional farmers (annual family labor incomes under $280)	Small and medium sized traditional and transitional-modern farmers (family labor incomes $280 to $800)
Potential Number	1,300,000	150,000
Actual serviced Number (1971-72)	200,000	30,000
Percent of Potential	15%	20%
Loans		
Type & Purpose	Subsistence and Production credit (seeds, fertilizer, small tools & equipment)	Production credit plus investment
Term	90% short term 10 % medium term	20 % short term 80 % medium term
Interest	3 % short term 3 % medium term	4 % short term 6 1/2% medium term
Collateral	Guarantee of two solvent persons	Co-signers (short-term) Lien on crops or livestock (medium-term)

Table 1- (cont'd)

	Société de Crédit Agricole et de Prévoyance (SOCAP)	Caisse Locale de Crédit Agricole (CLCA)
Appraisal	List of farmers wishing loan drawn up by SOCAP officials	Detailed application form required; farm visit in some cases
Typical amount	$ 20 to $ 60	$ 200 to $ 300
Repayment record	Variable: average of 60% during recent years	Between 95 and 100% during recent years
Costs & Finance		
Portfolio	Declining value and number of loans; erosion of funds due to non-repayment	Increasing value and number of loans (at rate of about 20% a year)
Administration costs	Performed in the course of duties by local officials	Average about 10% of loan value (1970-71). Percent decreasing as volume of credit increasing
Supervision	Performed by separate organization-agricultural extension services	Agricultural extension services; limited supplement by CLCA field agents
External finance & Institutional solvency	Depends on government grants	Operational deficits made up by government payment to parent organization; deficits have been declining with increased volume of loans
Image	Extension of government welfare	Sound Bank and credit organization
Weaknesses	Administrative organization; subsistence type credit; insufficient technical and financial supervision of loans	Over-emphasis on security of loans; insufficient supervision of loans

2. Loan purpose and type

The following types of SOCAP loans were listed in a 1967 report with the maximum size of loan for each as follows: (5, p.57)

(1)	Diverse loans	($260)
(2)	Repayable aid, or relief	($260)
(3)	Emergency loans, repayable	($ 40)
(4)	Emergency loans, non-repayable	($ 20)
(5)	Relief, non-repayable	($ 40)

The minimum is set at $6. Previously, repayment was in either money or in kind, depending on the nature of the loan. However, present policy is repayment in money only.

The minimum amount of seed to be given on credit is a sack of 100 kilograms of wheat or 80 kilograms of barley. In exceptional cases, as little as 50 kilograms of wheat may be given on credit. There is no minimum established regarding transfer of small equipment on credit.

Information was only available to show breakdown of SOCAP loans by production (including the "Operation Fertilizer" program), and for equipment (table 2). A part of the loans in money undoubtedly went for consumption purposes.

The terms of the loan vary according to its intended use, as follows:

(1) Crop loans are limited to one year.
(2) Equipment loans may extend for three years.
(3) Special loans for soil conservation can extend up to ten years, but they must be based on contracts established with the Department of Forest and Waters (Eaux et Forêts).

During the past ten years, approximately 90 percent of SOCAP loans have been short term credit for fertilizer, seed, small tools and equipment. "Operation Fertilizer" is a special program created in 1966-67, administered by SOCAP, as a means of increasing cereals production through increased use of commercial fertilizer and other improved practices. All farmers are eligible regardless of size of farm.

Loans from the CLCA have been made for a number of diverse production and investment purposes (see table 3). In contrast to SOCAP, loans have been about 80 percent medium term (3 to 5 years). Only during the past three years has short term credit been increasing due to increased livestock feeding.

TABLE 2- LOANS GIVEN BY S O C A P 1962-71
(in $ 000)

Agricultural Year	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Normal Credit										
Equipment loans in kind	-	-	-	135.8	101.4	46.4	101.4	51.2	31.2	24.4
Money	308.2	179.8	152.8	40.0	83.2	42.4	33.4	167.8	183.0	129.6
Total	308.2	179.8	152.8	175.8	184.6	88.8	134.8	219.0	214.2	154.0
Production loans in kind	3,301.8	3,166.0	2;060.8	4,006.0	3,961.4	5,079.6	3,158.8	1,374.0	970.0	920.8
Money	44.4	43.8	27.6	33.0	39.0	13.2	78.2	5.4	3.2	129.6
Total	3,346.2	3,209.8	2,088.4	4,039.0	3,990.4	5,092.8	3,237.0	1,379.4	973.2	1,050.4
Source of Loans										
Normal Credit										
SOCAP	1,417.6	864.2	1,186.2	1,804.4	3,139.0	4,475.6	2,804.0	1,423.8	1,011.8	891.0
CNCA Advance	2,236.8	2,525.4	1,055.0	2,410.4	1,046.0	706.0	557.8	174.6	175.6	313.4
Fertilizer Program	-	-	-	-	-	5,332.4	12,807.2	13,890.8	8,200.0	6,000.0
TOTAL LOANS (Normal & Fertilizer Program)	3,654.4	3,389.6	2,241.2	4,214.8	4,185.0	10,514.0	16,169.0	15,489.2	9,387.4	7,204.4

SOURCE: Economics Division, Ministry of Agriculture

TABLE 3- LOANS MADE BY CLCA BY YEAR, TERM, AND PURPOSE- 1967-72

	1967-68		1968-69		1969-70		1970-71		1971-72	
	Loans No.	Amount ($000)	Loans No.	Amount ($000)	Loans No.	Amount ($000)	Loans No.	Amount ($000)	Loans No.	Amount ($000)
Cereals & Grain Legumes	2,538	272.3	1,428	148.9	2,292	250.0	2,071	256.6	1,631	186.5
Harvest Expenses			3,331	259.8	1,492	133.0	1,080	103.0	784	72.9
Orchard Maintenance					95	7.9	88	5.8	13	1.2
Small Equipment							86	10.8	103	11.7
Alfalfa Establishment					4	0.4	12	1.2	12	1.6
Livestock Feeding					5,445	766.2	6,861	1,046.3	9,109	1,343.8
Total Short-Term	2,538	272.3	4,759	408.7	9,328	1,157.5	10,199	1,423.7	11,652	1,617.7
Soil Conservation					708	189.0	1,042	288.7	1,071	199.1
Wells & Irrigation	1,721	662.6	1,599	657.8	807	216.0	1,578	647.1	2,250	954.1
Livestock Shelters	3,312	1,023.0	3,683	1,496.2	4,575	2,008.6	4,436.	1,975.0	5,553	2,513.3
Harness & Animal Mach.	6,193	1,581.2	8,351	2,281.7	5,298	1,143.8	7,478	1,767.4	8,978	2,132.6
Breeding Stock	-	-	-	-	-	-	-	-	-	-
Small Equipment	808	166.4	611	152.2	367	71.6	794	171.9	676	150.2
Orchards	-	-	-	-	-	-	-	-	15	5.9
Motor Pumps	185	78.2	404	196.6	577	332.9	736	444.9	743	450.1
Total Medium-Term	12,219	3,511.4	14,648	4,784.5	12,332	3,961.9	16,064	5,294.0	19,286	6,505.3
TOTAL SHORT & MEDIUM	14,757	3,783.7	19,407	5,193.2	21,660	5,119.4	26,263	6,717.7	30,938	8,123.0

SOURCE: Economics Division, Ministry of Agriculture

1.75

Although the central purpose of the parent organization (CNCA) is to provide production type credit to farmers, over 50 percent of their total funds have actually been used for Government marketing organizations to finance surplus stocks, together with government operation of the recuperated lands. From 1961-71, 26 percent of total credits went to individual farmers, 17 percent to cooperatives, 5 percent to other primary groups, 17 percent to the provinces (for operation of recuperated farms) and 35 percent to other public institutions (largely for marketing organizations mentioned above).

C. General and Local Organizational Structure

Both small farmer credit organizations -- SOCAP and CLCA -- are local entities. See Figures 1 and 2 for their relationship to overall agricultural credit and government structure. A number of organizations also serve as credit intermediaries for special programs as sugar beets, cotton, or supply of breeding stock.

A local SOCAP chapter generally includes several tribes with a Caïd or chief as the executive officer responsible for its activities. It does not have its own administrative staff, but does have a board of which the Caïd is chairman. He directs the operations which are carried out by government workers, including those under the Ministries of Agriculture, Interior and Finance. The local tax collector serves as treasurer in receiving and disbursing all funds. Additional board members include the clerk of the local government office and one or more farmer representatives. The board passes on all applications for loans. Prior to establishment of the CLCA, all farmers who paid taxes were automatically members of SOCAP. Presently the reverse is true, farmers not paying taxes are automatically members while tax-paying farmers receive credit from the CLCA or CNCA.

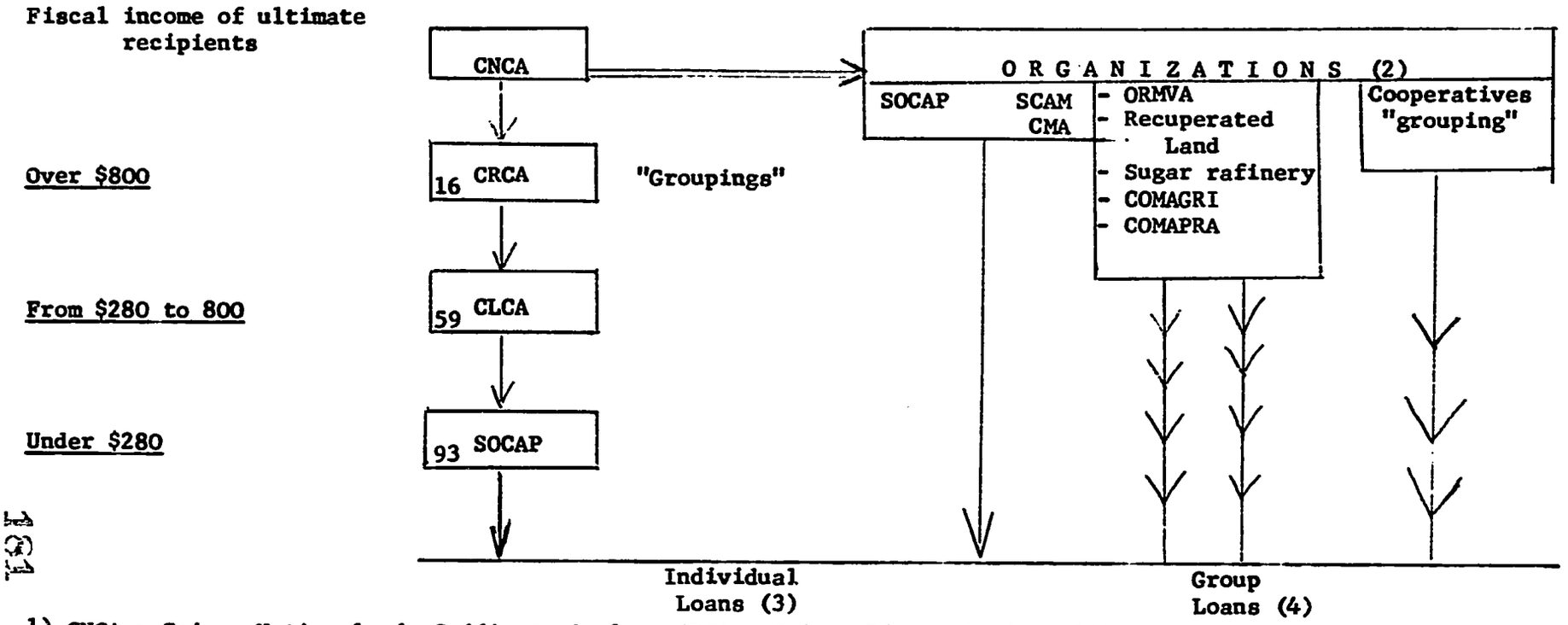
One general weakness of the SOCAP as a source of credit is that it is a collection of local credit societies. There is no corporate or cooperative structure (13, p.4). Lacking even an office and a manager of its own, when dealing with SOCAP, the farmer feels he is transacting business with the Government and not a credit organization as such.

Although there are no regional or central SOCAP offices as such, a provincial commission, headed by the governor, and with the clerk of provincial services serving as secretary, has the responsibility for developing annual programs for distribution of seeds and fertilizer. This commission has representatives from three Ministries, as follows:

Interior:	Governor and Super-Caid
Finance:	Inspectors of credit, collection and taxes
Agriculture:	Economic division, offices of livestock, horticulture, OCIC, vegetable protection, Forest & Waters, SCAM and CMA.

DIAGRAM OF SPECIALIZED AGRICULTURAL LOAN ORGANIZATIONS in 1971 (1)

Figure 1-



1) CNCA = Caisse Nationale de Crédit Agricole - CRCA = Caisse Régionale de Crédit Agricole
CLCA = Caisse Locale de Crédit Agricole - SOCAP = Société de Crédit Agricole et de Prévoyance
SCAM/CMA = Société Coopérative Agricole Marocaine et Coopérative Marocaine Agricole
ORMVA = Office Régionaux de Mise en Valeur Agricole
COMAGRI = Compagnie Marocaine Agricole - COMAPRA = Compagnie Marocaine de Commercialisation des Produits Agricoles

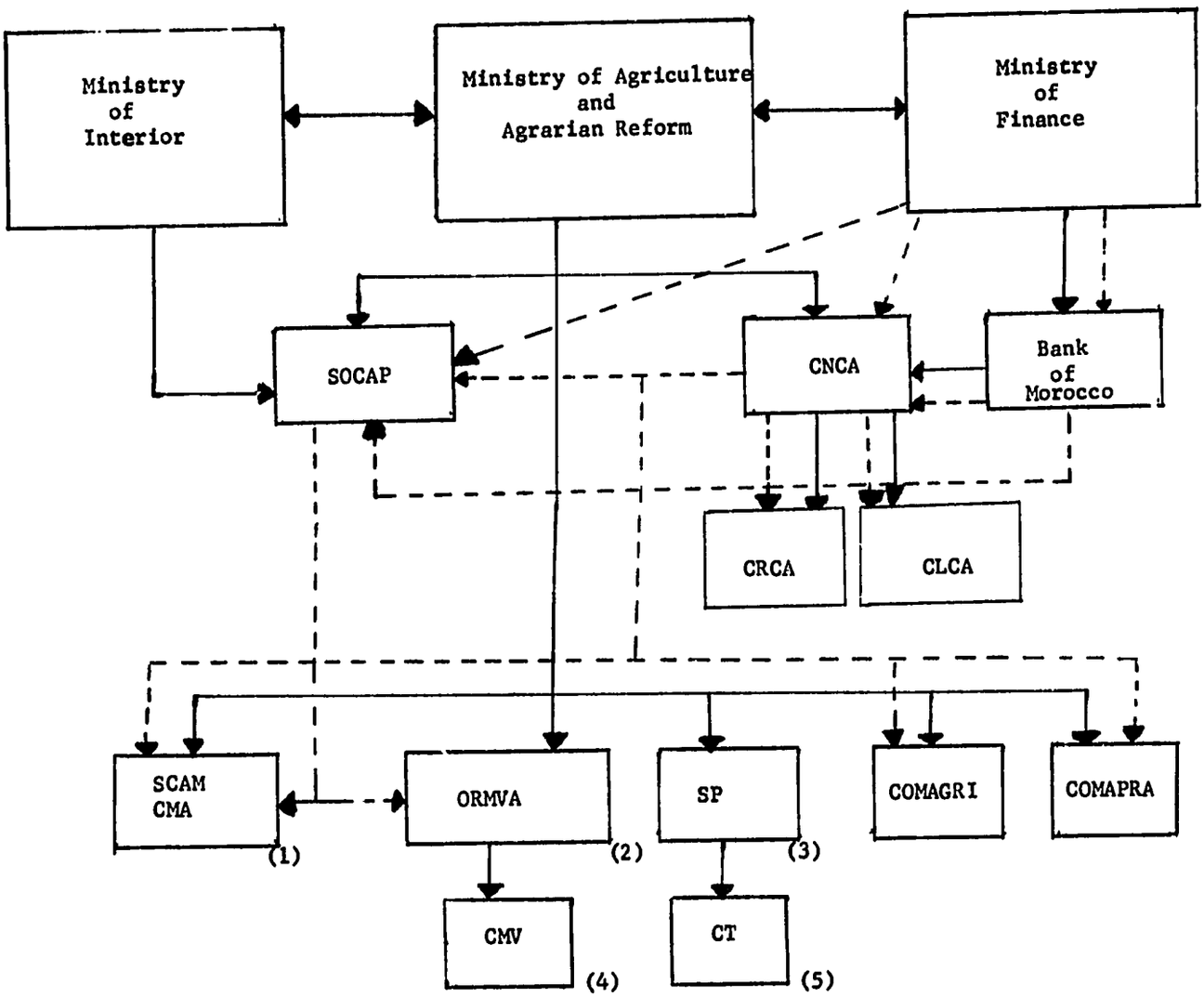
2) The organizations which benefit from CNCA & CRCA loans can be either distributors (like the SOCAP & Local offices)or users (like the SCAM, CMA, entreprises, Provinces, Préfectures; coopératives groups), or both at the same time.

3) The recipients of the individual loans which are given by the Bank and from the organizations giving credit, can also be engaged in non-agricultural activities. Onlyrecipients of SOCAP loans would be exclusively farmers.

4) The word "groupé - group" means every loan that is intended for a group of producers, whatever their nature, their base, their form and their object may be (coopérative groups, or not, of marketing, of mechanization,

SOURCE: Dossier Economique, Tome I, FAO-PRAM (Projet Revalorisation de l'Agriculture en Sec au Maroc)UNDP,1971

FIGURE 2 - ADMINISTRATIVE STRUCTURE OF AGRICULTURAL CREDIT AND MONETARY FLOW IN MOROCCO - 1972



CODE _____ Administrative Structure
------ Monetary flow

Regular credit of the SOCAP comes directly from Ministry of Finance.
All other credit including Operation Fertilizer is channeled through CNCA

(1) Marketing
(2) Regional Agriculture development and extension office in Irrigated zones
(3) Regional Agriculture development and extension office in Rain-fed zones
(4) Work Center - Irrigated zones
(5) Work Center - Rain-fed zones

A supervisory and Control Council, with the Prime Minister as president is the most important organ of the SOCAP. The Council includes a representative from the Ministry of Interior, two representatives from the Ministry of Finance, a representative from the appropriate service agencies, and the Chief of the Provincial Services for each province being considered. It has the power to create legislation, to set budgets, and to ratify, modify, or reject decisions of the Administrative Council. It meets in Rabat twice a year and a report of proceedings is developed to show:

(1) Statistics revealing the financial condition of each SOCAP.

(2) Their problems.

(3) A summary of proposed solutions and directives.

The typical CLCA office is made up of a manager or director, a loan officer, an accountant, assistant accountant and a person responsible for collection of loans who also assists in the accounts section (see figure A-1 in appendix). 1/ The Director, generally, has had training in agriculture, as has the loan officer.

The parent organization, the CNCA, is administered by a Board of Directors consisting of 22 members, with the Minister of Agriculture as President. A Management Committee of six to eight members is responsible for day-to-day management under the overall direction of the Council. CNCA's General Manager (or his deputy, the Secretary General) is Chairman, and members include representatives of the Ministries of Finance, Agriculture and Interior. The General Manager is the Chief Executive.

Under the Secretary General there are three main sections: credit; finance and accounts; and technical and economic studies (Appendix-figure A-2). There are 17 Regional Offices, which report directly to the Secretary General. At the end of 1967, total staff was 227, of which just over half were in the Regional Offices. There was a serious shortage at the senior management and at the higher administrative and technical levels. In December 1967, after IBRD had pointed out the inefficiency arising from this shortage, CNCA recruited further staff. By 1971 management had improved considerably. Total staff was 487 and the members in the senior grades, mostly well qualified, had increased fourfold.

1/ Discussion of CNCA and CLCA relies heavily on reports of the IBRD (10, 11 and 12)

D. Beneficiaries

1. Selection criteria

A farmer's eligibility to receive credit either from the CLCA or SOCAP depends on his estimated income or fiscal revenue (see figure 1)[1/]. This income is calculated by the rural tax service based on potential earnings from agricultural resources owned by the farmer.

Farmers having less than $280 estimated income do not pay tax and, therefore, are eligible only for SOCAP credit.[2/] Under the SOCAP credit, a list is drawn up of farmers wanting credit. A given allocation of capital is then divided up between the people on this list with practically no economic criteria used. It has been reported that many unqualified persons have often been included in the lists. Their share of the loan allocation has usually not been repaid at the end of the loan period.

In order to receive medium term credit (3 to 5 years) from the CLCA, a farmer must either own the land he is farming or have a written three year lease. This is in addition to minimum estimated income requirement.

Generally, farmers having less than 5 hectares of unirrigated land are considered marginal from the standpoint of credit. However, a popular credit use has been the installation of irrigation pumps and motors. This permits the small farmer to intensify his production, increase his sales, and thereby enable repayment of the loan.

1/ Fiscal revenue is the measure of farm productivity used as the basis to determine the amount of credit to be provided to a given farmer and from which organization. It is a theoretical potential income calculated by the type of land (irrigated or dryland); livestock, or orchard crops. For example, the Fiscal Revenue for cereals under traditional and modern farming is $20 and $30, respectively, per hectare. Cattle or camels are $16 per head and sheep $6. Total fiscal revenue would correspond to a conservative estimate (especially for modern farmers) of a farm family's net return to labor and management or -- farm labor income.

2/ This minimum was lowered to $160 in 1972 for CLCA eligibility.

2. Graduation of Beneficiaries

The SOCAP program does not give credit in sufficient quantities and credit is not accompanied by technical assistance to permit the farmer to carry out significant capital formation and lift himself above his largely subsistence level.

The CLCA credit program is oriented towards medium term farm investments aimed at putting the farmer on a modern commercial footing. However, the program has not been operating long enough to graduate many farmers out of its range of eligibility or from subsidized government credit.

3. Number and Types of Beneficiaries

The typical user of SOCAP credit is a small traditional farmer growing cereals and marketing a very small proportion of production. Information on the number of farmers served by SOCAP is conflicting. SOCAP officials reported that up to 400,000 farmers received loans during recent years; IBRD cited a total of 208,000 farmers receiving credit from SOCAP and CLCA in 1971 (10, p.4). The FAO estimated 100,000 to 150,000 farmers served by SOCAP in the 1969-70 agricultural year. (8, section 5). Present numbers are likely to be about 200,000.

As mentioned, CLCA lends to the semi-modern and medium sized farmer. Information on CLCA lending is given in table 3. As indicated, number of loans made per year (coinciding roughly with the number of farms served), doubled during the 5 year period to over 30,000, while the amount of credit per year more than doubled.

In addition to direct loans from CLCA, many small farmers receive production credit for special crop campaigns and for breeding stock. This credit from the CNCA is channeled through various intermediary marketing and development organizations to the farmer (figures 1 & 2).

IBRD estimated that 60,000 farmers received this type of credit in 1971 (10, p.4). No breakdown by type or size of farmer was given but the majority would probably be medium sized farmers primarily in the irrigated areas.

4. Other Sources of Credit

Small amounts of credit (mostly consumption) are obtainable from money lenders, merchants, family and other private sources. However, informed observers report that this type of credit has declined considerably in recent years due to decreased confidence in security of repayment. Another alternative financing which is common, especially in livestock, is that of "associations". This is an arrangement whereby an investor will provide the capital -- a number of sheep for example --

to a farmer who has land or grazing rights but lacks the animals or the means to purchase them. The proceeds or increase in flock are subsequently shared according to a mutual agreement. Useful information on prior indebtedness of borrowers for SOCAP or CLCA credit was not available.

5. Profile of Farm Community

Typically, a farm community is made up of a large number of small holdings (less than 5 hectares each) interspersed with a few large and sometimes modern farms. (see distribution of farms by size in appendix table A-2). Farm size and systems of farming are more heterogeneous in the coastal plain area. This is particularly true where well irrigation can be used for the production of fruit and vegetables.

About 15 to 20 percent of small traditional farmers, and possibly a third of the transitional-modern small farmers, are estimated to use some agricultural credit.

E. Lending Policies and Procedures

1. Portfolio

SOCAPs provide largely seasonal credit in typical amounts of $20 - $60 per farmer at an interest rate of 3% per year. (table 2). Security requirements are less stringent than for loans to larger farmers. SOCAP officials are poorly paid, and the interest rate to borrowers is too low for the societies to become profitable. The activities of SOCAP, which are much more socially than economically oriented, have declined over the past five years and are to be replaced by CLCA lending.

The maximum value of a SOCAP loan to a given farmer is restricted so that the annual repayment will be equal to no more than 40% of the farmer's estimated annual income. However, a farmer may at times be a recipient of more than one loan (short term) and therefore this limitation is often circumvented.

During the year ending August 30, 1972, CLCA made nearly 31,000 loans, amounting to $1.6 million short-term and $6.5 million medium and long-terms, a total of $8.1 million (table 3). Short-term credit was a very small share of total lending during the first two years. Beginning in 1969-70, the large number of livestock feeding loans increased the volume of short-term credit, accounting for 83 percent in 1971-72. Under medium term credit, livestock housing has accounted for about a third of the credits given during the past two years. Second in importance regarding amount of credit, and leading in number of loans is for

draft animal harness and equipment. Irrigation well development and motor pumps are the third most important medium term credit purpose. This latter activity has shown a strong and steady increase over the years.

Seasonal loans for crops are given on the basis of a fixed sum per hectare. For cultivation of maize, groundnuts and melons, a slightly higher sum is given if machinery is used. These loans represent around 40 percent of the seasonal costs of growing these crops. Length of loan depends on the growing period of the crop and can vary from 5 to 10 months. Seasonal loans for livestock fattening are given on the merits of each individual case. Half of most seasonal loans are paid to farmers as soon as the loan is approved, and the other half after proof that the required farm inputs have been bought.

Medium term loans for tractors with accessories, pumps, harvesters and other agricultural machinery (generally for cooperatives) are usually for periods of up to five years. The loan is for a maximum of 70 percent of the purchase price. CNCA pays the supplier direct after receiving evidence that the purchaser has paid the balance. Security is a chattel mortgage on the machinery. Interest rate is 6.5% a year.

Long term loans for on-farm improvements, particularly farm buildings, are usually for a maximum of 10 years, though the average is about seven. Security is usually a mortgage on the farm, coupled in some cases with a guarantor. Interest rate is 6.5% a year.

Applications for loans from production cooperatives, including Agrarian Reform cooperatives,[1/] and from agricultural enterprises are considered by the regional or national offices of the CNCA, and loans can be for any of the purposes outlined above. Loan regulations are also similar to the above. After examination at the office and in the field as required, loans are referred to the Management Committee for approval. Security is usually a lien on the crops produced, together with in the case of cooperatives, the collective guarantees of the individual members, or additional guarantees in the case of enterprises. Interest rate is 6.5% a year.

1/ Cooperatives formed under the land reform and settlement program on lands of former European settlers.

Applications from groups of farmers (Groupements de Mécanisation) for tractors and harvesters are considered by the CNCA under procedures similar to those above. Loans to these machinery "cooperatives" are for a maximum period of five years at 6.5% interest, and security is a chattel mortgage on the equipment being purchased. Additional security through the collective guarantees of the members is occasionally required.

2. Interest Rates

The Government has made credit available at preferential rates for industry and agriculture. Such measures have made it difficult to arrive at a true market rate of interest. Annual interest rates charged to farmers on loans vary from 3% through SOCAP, 4% and 6.5% through CLCA, to 6% short-term and 6.5% medium and long-term through CNCA (10, p.4). Commercial banks charge around 8% for seasonal loans and up to 3% for advances against goods. The discount rate is 3.5% reduced to 3% for agriculture. Despite low interest rates, CNCA has continued to realize slight surpluses, mainly because of the low cost of its resources and nonassumption of risks under special programs.

The interest rate to farmers could be increased so as to be more in line with the true cost of capital, which on the basis of market rates would appear to be at least 10%. A higher rate than the existing 6.5% on medium and long-term loans should be well within farmers' debt service capacity. Moreover, the cost of CNCA's resources for its own operations is projected to increase from 2.1% in 1971 to 2.7% by 1976 and its administrative costs, expressed as a percent of average capital employed, will increase from 3 percent in 1971 to 3.4 percent by 1976. Its present earnings at a rate of 6% on capital employed would be insufficient to cover such increases. On all these considerations, a minimum rate of interest of 8% on all agricultural loans would be justified. However, the Government feels that this would discourage lower income farmers from borrowing and has proposed to maintain the present interest rates for lending to farmers having a taxable revenue of less than $1,200.

Although inflationary pressures are an increasing problem, the cost of living has been reasonably well controlled. There has been an average of 2.3 percent increase in the cost of living index (Casablanca) per year since 1963.

3. Collateral

A medium term loan from SOCAP requires as security the co-signature of two responsible persons. In case of non-repayment, the administration can require the repayment by these two warrantors.

Security of loans under CLCA follows the policy of its parent organization. Medium and long term loans generally require a lien on crops or livestock. For larger short term loans, a co-signer is also frequently required. Land is generally pledged only by larger farmers. It should be noted that the process for taking land for non-payment of debt is a long and difficult one.

4. Other Subsidy

In addition to subsidized interest rates, the CNCA is reimbursed for losses in its management of the CLCA (see section II G.2.).

5. Appraisal techniques
(See section II D. for discussion of SOCAP loan procedure)

The request for a CLCA loan from an individual farmer includes details of fiscal revenue and evidence that taxes have been paid, proposed security, proforma invoice (for machinery purchase), plans and quotations (for building construction, wells and pumps), and farm data. Upon receipt of a loan request at a Regional Office, a technician visits the farm and verifies the information, except in certain cases where the client is well known, and the farming pattern has not been altered. A visit is mandatory for all short term loans for cereal and vegetable production above $4,000 and for all medium term machinery loans above $4,000. After the technician is satisfied, the loan is referred to the regional Credit Committee. Average time from receipt of application to approval of loan has been less than 21 days for the past two years, which is commendable.

F. Collection

1. Repayment Record

Repayment of SOCAP loans has been variable from year to year depending on harvests and ability to repay, as well as collection efforts by the local authorities. During recent years, repayment on regular credit has been about 60 percent. Repayment of loans under the special production credit program for cereals (Operation Fertilizer), administered by SOCAP, has been less than 50 percent, since its beginning in 1966-67. One of the reasons for the poor record of the latter is that there was possibly an "oversell" of credit to farmers, especially in the early years of the program.

The repayment record of CLCA for medium and small farmer loans has been excellent (over 95 percent recovery rate in recent years), and surpasses the record of CNCA for larger farmers.

2. Methods of Collection, Enforcement, and Debt Rescheduling

Recovery of SOCAP loans is the responsibility of the Provincial Collector with the help of local authorities. Collections are generally made at the beginning of summer when the farmers are most likely to have the means with which to make payment. It is reported that lists of farmers and loans to be collected are often delivered to the Collector late in the summer, making collection more difficult. In the event of non-repayment and inability to collect, a letter is sent to the local authorities informing them of the individuals concerned and amounts unpaid. If necessary, the officials then take legal action to collect the debt. Jail terms of varying length, depending on amount of bad debt, have become a common feature of small farmer credit in Morocco.

The procedure for collection of CLCA loans is similar to the above. The CLCA makes a point of avoiding collecting problems by not giving the farmer any more credit than he can handle or making repayment arrangements he cannot meet. The Bank also puts pressure on local authorities to collect outstanding loans (pushing for legal action). Overdue loans are charged a further 2% a year, if not paid within two months of due date. Since 1968, the Bank has made considerable efforts to improve loan recoveries. At each Regional Office, a separate section is engaged full time in such work. Repayment is always in cash for both CLCA and SOCAP. In the case of cotton and sugar beets, the amount of loan and interest is deducted from farmer payments on delivery of produce to the factory.

Rescheduling of loan payments may be authorized but only when justified by some catastrophe such as flood or severe drouth.[1/] In this case, the farmer has to come to the loan office, fill out the necessary forms and the rescheduling is considered for approval by the loan committee.

G. Costs and Finance

1. Portfolio Profits and Losses

As shown in table 2, the volume of normal or regular SOCAP credit has declined sharply in recent years. This can be attributed to the erosion caused by poor repayment and reduced funds allocated to the organization. The special "operation fertilizer" revolving credit fund reached a peak volume in 1968-69 with subsequent reductions to less than half of this level in 1970-71. Here again, very low rate of repayment and lack of new capital coming in to replenish the fund, forced the cutback.

1/ In 1972, the Government announced that debts of small farmers incurred prior to 1967 would be written off. Debts incurred since then would be extended for another five years.

Total volume of credit under CLCA has more than doubled from 1968 to 1972 (see table 3). Inflation during this period averaged about three percent per year (cost of living index rose from 105.5 in 1968 to 120.6 in 1972). Since a major share of this credit was medium term (3 to 5 years), the turnover of capital has been limited, requiring additional infusions of capital. The parent organization, CNCA, has shown an increasingly favorable operating position with larger volume of credit in recent years.

2. Administrative costs

The administrative costs of SOCAP are impossible to estimate since the local officials and authorities perform the tasks of administrating the loans as a part of their official functions within the province.

Table 4 presents total income and expenditure for administration of separate CLCA operations during 1970-71: 26,263 loans made for a total of $6.7 million in credits or $256 average per loan. This average expenditure per loan is approximately $26 or about 10.2 percent of the amount of credit given. Costs of personnel account for about 84 percent of this expenditure. After deducting income from interest received and penalties on overdue loans, the net cost (loss) amounts to about $8 per loan or 3.1 percent of credits given. The commission paid by the Government to CNCA for CLCA operations represents the difference between CNCA's income and its expenditures on behalf of CLCA. CLCA salaries and wages are included in CNCA's expenditures and CLCA income from loans, in CNCA's income. Additionally, CNCA incurs expenses to cover its overhead at the Head Office on behalf of CLCA. The deficit is made up as the commission and has been decreasing each year as the volume of CLCA credit has been increasing.

As for distinguishing between costs of administering the loan and administering the technology, nearly 100 percent of the costs could be considered for loan administration since the agricultural extension service of the Ministry of Agriculture is responsible for the functions of technical assistance to both CLCA and SOCAP.

3. Beneficiary Savings

Under either CLCA or SOCAP, borrowers are not required to participate in any savings program. However, the Bank began a savings program in 1970 paying 1½% interest to depositors. By August 1971, about $5.2 million had been deposited.

TABLE 4 - INCOME & EXPENDITURE OF CLCA - 1970-71

US $

INCOME		EXPENDITURE			
Interest Medium-term	405,491	I.	PERSONNEL		
			C.L.C.A.	500,489	
			Headquarters (share)	77,138	577,627
Interest Short-term	63,495				
		II.	WORK PROVIDED-EXTERIOR		
			Rent of computer	26,787	
Penalties on overdue loans	10,620		Miscellaneous	738	27,525
		III.	TRANSPORTATION & TRAVEL		23,254
DEFICIT	210,101				
		IV.	ADMINISTRATIVE COSTS		
			Equipment	25,925	
			Mailing	2,051	
			Telephone	2,273	
			Other costs	736	30,985
		V.	FINANCIAL CHARGES		746
		VI.	DEPRECIATION & TRAINING		
			Equipment	7,159	
			Cost of Training	18,675	
			Computer	3,736	29,570
	$689,707				$689,707

Source: CLCA

F&A
12/15/72

4. External Finance

SOCAP receives external funding for its normal credit operations from a surcharge placed by the Government on rural taxes collected. The rate of surcharge is determined by the Government in relation to requirements or demand for credit by SOCAP. As shown in table 2, normal credit of SOCAP has dropped sharply since the beginning of "Operation Fertilizer". During 1966 to 1970 $3 million in U.S. owned currency (PL 480, Title I) and over $21 million in loan counterpart or Title IV, were deposited to this revolving fund.

In 1969, Government grants were rearranged. This included shifting a part of the SOCAP allocation to CLCA. The total Government grant was over $11 million in 1971. CLCA also had rediscounting privileges up to $2.2 million at 3% interest with the Central Bank in 1971 which were fully utilized. Thus far, the CLCA has not received any foreign donor assistance. However, external financing is presently being sought by the Bank to meet expanded credit requirements of the CLCA in its replacement of the SOCAP over the next four years.

5. Institutional Solvency

Since SOCAP does not operate on a commercial basis, it has to depend on continuous infusions of capital to maintain its operations. Increased Government grants have also been required due to the poor record of loan repayment.

In response to recommendations by IBRD, the CNCA agreed that its operations for CLCA on the Government's behalf, be kept in a separate account with deficits to be paid by the Government. As discussed under section G.2, these deficits have been decreasing with increased volume of lending.

6. Foreign Exchange Balance

During the past seven years, the quantity and value of imports and exports have been highly variable (see Appendix table A-6). Sugar imports have declined since 1965 while domestic consumption has increased. Although not quantifiable, credit has likely been instrumental in increasing sugar production as well as maintaining or increasing production of certain export crops. It is assumed that the value of the increased production has been greater than the cost of imported farm inputs financed by the credit programs.

H. Complementary Factors

1. Technology

a) Directing, Tying, and Packaging

Under SOCAP, credit is commonly provided in kind except for longer term purposes such as purchase of an irrigation pump or other item not available through normal government distribution channels.

Under CLCA, the credit is almost never given in kind. Rather, upon approval of the loan, the farmer receives a paper, or line of credit, which he takes to the supplier of the item he is purchasing under the credit.

A considerable amount of program credit has been tied to a set of inputs and technology. Most commonly, this has been improved seed along with the appropriate kind and amount of commercial fertilizer. Under the Regional and local extension offices, various production campaigns are carried out including sugar beets, cotton and cereals production. Under each of these, the needed inputs and services are generally supplied the farmer in kind. The farmer pays the cost of these to the CNCA or SOCAP in cash after harvest or the amount is deducted from sales receipts from the factory (in the case of sugar beets and cotton).

b) Extension and Supervision

Although the assumption may be made at a higher level that technical services are sufficient to assist the credit program, the truth of the matter is that they are quite limited, except for some organized special programs as cotton and sugar beets. Coordination is attempted at the central and regional level (provincial) through meetings between credit and extension officials. At the local level, extension agents lack the necessary transportation and incentives to follow through properly once a loan is made.

Technical supervision by the agricultural extension services has commonly involved more inspection than technical supervision for the direct loans from CLCA and SOCAP.

The inadequacy of extension services presents one of the major obstacles to future development, particularly in the rainfed regions. The present staff is 1,600, but many more could be effectively used. Extension agents tend to work mostly with medium and larger progressive farmers. However, recent policy changes within the Ministry of Agriculture appear to favor working with the smaller farmer. The present extension training centers graduate 300 men per year ("Adjoints

Techniques" and "Agents Techniques"), of which more than half are needed to keep up with expansion in the irrigated areas. Some revision in the training methods (more practical work), recruiting (farmers' sons from the area where they will be employed), and salary incentives would improve technical assistance to farmers.

Recommendations have been made for the Bank to become more actively involved in supervising the utilization of its loans rather than relying so heavily on the regular extension service. This is especially true in the area of financial and farm management.

Until recently, agricultural research was carried out by a semi-autonomous institute, INRA (12, p.25). Its sizeable resources and activities yielded satisfactory results. Since it has been incorporated into the Ministry of Agriculture its budget has been curtailed and its activities have declined. Interesting results have recently been obtained in the cultivation of sugar cane, soy bean, tea, and improvements in a number of existing crops, such as soft wheat, citrus, tomatoes and forage. As in many countries, however, research activities are sometimes carried out too isolated from the practical problems facing agriculture and there is not enough communication between research and extension staff.

For the multiplication and distribution of breeding stock (pedigree cattle and sheep), seeds and fruit trees, COMAGRI, a Government-owned corporation under the direction of the Ministry of Agriculture, was set up in 1964 (figure 1). Despite a rapid expansion of its activities, COMAGRI has been unable to keep up with demand. The corporation's financial status has also been affected by its being charged with a number of unprofitable and non-related activities, and its limited eligibility for credit. In view of its developmental role, COMAGRI's structure should be reviewed and its financial resources could be usefully increased.

c) Nature of Technology

New technologies commonly involved in credit programs include use of commercial fertilizer, improved seeds, deeper plowing, better seedbed preparation, and weed control. These practices have been reasonably well designed and programmed for the farmers' application in the case of sugar beet, cotton, and oilseed production. Training of extension agents (and some farmers) is also generally given in carrying out the improved practices on each of these crops.

2. Supplies and Sales

a) Program supplies

Small materials such as seed, fertilizer, small tools and equipment are channeled by the Government down to local government service centers[1/] ("Centre de Travaux") where they are subsequently distributed to farmers under the SOCAP system by the extension agents. Supply logistics, especially under "Operation Fertilizer", have often been poor. Fertilizer and seed have arrived late or not in the quantities ordered. Delays are often encountered in distribution of supplies to the farmer at the service center. It is reported as not uncommon for a farmer to have to wait two or three days just to get one bag of fertilizer.

Larger materials often involving a medium term loan, require the farmer to obtain estimates from commercial suppliers. Upon the Credit Committee's approval, the farmer receives a line of credit or purchase order which he takes back to the selected lowest cost supplier. The same procedure is followed for obtaining agricultural supplies on credit from the CLCA. The price of certain farm inputs is subsidized by the Government from 10 to 40 percent, depending on the particular program.

b) Program Infrastructure

In general, neither SOCAP nor CLCA is involved in financing rural infrastructure.

c) General access and availability

Effectively, only the larger farmers have access to supplies and services from the private sector. It is doubtful whether under any circumstances the private sector would be prepared to extend credit to the small farmer in view of high risk/low profit factor.

How much the logistical problems mentioned under a) above have hampered the effectiveness of the programs is difficult to assess. Overall, it has certainly been a factor in undermining productivity but not the most important one.

1/ These are the "Centre de Travaux"(C.T.) in the rainfed areas, and "Centre de Mise en Valeur Agricole" (CMV), in the irrigated zones from which are dispensed extension advice, machine services, seeds, fertilizers and other farm inputs.

d) Guaranteed sales and price supports

All farmers have price supports on wheat, barley, corn, sugar beets, cotton, and oilseed crops. The lack of timely harvest credit, however, may preclude the smaller farmer from taking advantage of supported prices. Collection and transport of produce is generally the responsibility and at the initiative of the farmer.

e) Insurance

A crop insurance program has not been available to farmers thus far. However, in view of the uncertainty and variation in rainfall from year to year (periodic drouths as well as floods in some regions), Insurance would help to strengthen the credit program and facilitate the increased use of fertilizer and other improved practices.

f) Other Program Marketing Arrangements

SCAM (Société Coopérative Agricole Marocaine) and CMA (Coopérative Marocaine Agricole) are the marketing arms of the Ministry of Agriculture for cereals and farm supplies. (14, pp.47-50) They are the only governmental organizations equipped to sell and buy from the farmer. Their effectiveness has been considerably less in supplying farm inputs than in the buying of farm produce.

SCAM is a corporation whose capital stock is owned by the Ministry of Agriculture, much the same as the Commodity Credit Corporation (CCC) in the United States. Like the CCC, this organization is the prime means by which the Government administers prices. While SCAM has no authority to issue credit, it is the physical mechanism through which loans, mainly in the form of seed and fertilizer, are made to farmers against their crop.

CMA has a similar function to SCAM but is located in the non-cereal and less productive agricultural areas. This organization operates in five out of twenty-one provinces.

SCAM has two types of membership. Farmers with 20 hectares or more are eligible to join individually by paying a one-time membership due of about $40. Smaller farmers are represented by their local SOCAP which in turn belongs to the SCAM. For example, the Rabat SCAM has its main facilities in the city of Rabat and serves about 1,000 individual members having an average holding of just under 30 hectares. There are also four sub-centers in the Rabat Prefecture, each having a SOCAP organization. SCAM is a warehousing organization to which farmers may come in groups of three or four, with their own trucks, to buy fertilizer or seed and to sell their products. For the Rabat SCAM organization, this represents about a 25 km. average hauling distance.

The farmer gains nothing in terms of equity in SCAM, but apparently receives an indirect dividend in that he pays only variable costs for the marketing services he is supplied. Farmers dealing with SCAM are required to sell all of their produce through this organization, though in practice this rule is not followed.

There were approximately 5,000 individual farmers along with 41 SOCAP chapters belonging to the various SCAM organizations in 1965. As individual farmers have become disenchanted, membership has reportedly declined. The ten-year averages of total production and percentage of production indicate that the portion of cereals handled by CMA-SCAM is relatively small but almost all fertilizer is handled through this organization.

g) General Marketing Conditions

Except for vegetables and minor specialty crops, marketing is not considered to be a serious limiting factor in the development of the small farmer sector. Ninety percent of all farmers engage in cereals production and a majority in livestock production. During the past ten years, production of bread wheat has fallen short of domestic consumption requirements with imports making up the difference. Major cereals prices are supported by the Government at favorable levels. Meat and dairy product prices have increased in recent years reflecting growing demand. Furthermore, Morocco has a well developed road and transportation system. Although improvements could be made in the marketing system, it is capable of handling increased output without a significant loss in efficiency.

h) Profits and Risks

A predominant share of credit for small farmers has gone to finance improved wheat production technology. A TVA study made in 1966-67 showed benefit-cost ratios for use of fertilizer on wheat (value of increased production/cost of added fertilizer) ranging from 2.77 to 4.46 depending on rainfall. (14, pp.81-109).

Five hundred (500) tons of high-yielding Mexican wheat seed was imported for the 1967-68 crop year. Conditions during 1968 were very susceptible to Septoria. As a result, farmers who were induced to try the new varieties suffered low yields relative to those of standard varieties. Even though these farmers were later indemnified for their losses, confidence in the new high-yielding wheat varieties was shaken and the program retarded.

A major FAO study on development of the dryland agricultural sector in Morocco showed a marginal benefit-cost ratio of 2.3 for improved practices on wheat using better seed and fertilizer but

using animal power (8, sect.II). When improved seed and fertilizer were combined with tractor mechanization and an improved rotation, the ratio became 4.2. The same study reported costs and returns for improved practices in livestock production and fattening. Cattle on feed gained weight at a feed cost of about $.30 per kilogram. The market value of this live weight gain would be from $.75 to $1.00. In another case, improved production practices, largely consisting of growing and feeding forage crops, yielded a ratio of 3.2 (cattle production).

Finally, the high repayment rate of CLCA borrowers (nearly 100 percent) is also some indication that the investments financed must have been reasonably profitable.

III. EVALUATION

A. Performance

1. Apparent uses of credit

There is little factual data to show whether credit has been used for its intended purpose. In one SOCAP supported program, "Operation Fertilizer," misuse of credit during the first years was notable. A considerable amount of fertilizer received on credit was reportedly sold by small farmers. These unauthorized sales took place supposedly because the farmers were not convinced of the value of the fertilizer applied to their crops nor how to use it. It is generally agreed that there has been much less diversion of credit from intended purposes under the CLCA than SOCAP. This is due to more careful screening of loan applicants and closer surveillance.

2. Effects

a) Production

One study which can be cited as measuring the actual effect of small farmer credit on production is the "Operation Fertilizer" program (SOCAP). Sample surveys have been made by the Division of Statistics of adjacent wheat fields receiving fertilizer and those not. The results have shown approximately 500 kg yield increase per hectare over traditional unfertilized fields (800 to 1,000 kgs per hectare yield). The value of increased production was approximately $40 compared with added costs of $19 for a benefit-cost ratio of approximately 2.1. Had this program been more efficiently implemented, the increased production effects would undoubtedly have been greater.

There is limited information to assess the aggregate production response from the use of the profitable technologies cited in section II-H.2(h). Thanks to extremely favorable rainfall and growing conditions, there have been bumper cereal harvests during the past five years (Appendix table A-5). Thus far, the development of cereals technology has been strongly concentrated on bread (soft) wheat. Therefore, one could expect a diverging trend in yields and production of this crop in contrast to other cereals. However, based on an analysis of production statistics, bread wheat has not shown a significantly greater production increase than durum wheat, barley, or corn. This indicates that too small a proportion of farmers have adapted the improved practices to affect aggregate production. Credit is undoubtedly one important factor retarding farmer adoption of the improved practices.

Sugar beet production is one case of effective credit supported by intensive technical supervision and assistance. Total production of sugar beets has more than doubled during the past four years. The Agricultural Development division of the Ministry of Agriculture provides the farmer with seed fertilizer, custom machine services, and other inputs for the production of beets. These are supplied on credit along with cash advances for payment of labor. In 1972, farmers complained that the price for sugar beets was too low for profitable production. The Government subsequently increased the price from $12.00 to $13.20 per ton. While it is believed that the former price permitted a fair return, other profitable crops, notably high yielding varieties of wheat, have made beet growing less attractive. It could also be argued that the credit and other assistance given were strong inducements for farmers to grow this crop.

b) Farm income

Credit to small farmers thus far has been in fairly limited amounts per farmer and has served a small percentage of the total. This is especially true of SOCAP. However, due to lack of technical supervision and logistical support, the income effects of even the small amounts of credit given has been limited. For example, it is likely that very little, if any, increased production of grain, ever enters commercial channels, but instead goes to increase the farm family's consumption in a small way.

Under the Government's land redistribution and farmer resettlement program, credit is an extremely important factor in the progress of newly organized cooperative farms. Although of limited magnitude, the program is beginning to demonstrate the attainment of higher farm incomes from credit when accompanied by input of technical and managerial assistance -- one extension agent to 25-30 farmers.

c) Technology

Credit has undoubtedly had some impact on introducing small traditional farmers to certain improved practices and new enterprises such a vegetable production and livestock fattening. The development of wells and pump irrigation has also been speeded up. This is possibly most apparent in the coastal areas and the southern part of the country where early vegetable and fruit production has been rapidly expanding.

d) Savings and other Sources of Finance

Savings deposits have not been required by loan recipients. However, loans do not cover 100 percent of the cost of most farm investments. For example, a farmer must bear approximately one-third of the cost of developing a well for irrigation.

Only one bit of evidence can be cited as a possible disincentive to savings flowing into farm financing on account of low interest rates charged by agricultural credit institutions: that Postal Savings increased by 18 percent in 1971. About a third of the depositors in these savings accounts, which pay approximately 3.5 percent interest, are rural residents or farmers.

e) Employment

Recent estimates of unemployment in the rural area range from 20 to 40 percent of the labor force depending on definitions. Underemployment is extensive, especially on a seasonal basis in the traditional cereals growing areas. The Souss valley Region in the southern part of Morocco offers an example of rapid agricultural development (largely fruit and vegetable production) assisted by credit. In this region, farm labor rates have risen to double or triple that of some of the poorer regions of Morocco, especially during peak work seasons. Volume of credit flowing from the regional and local offices of the CNCA have increased at a faster rate here than in most other regions of the country.

f) Political and Social Structure

Relatively abundant credit on good terms has permitted the modern agricultural sector to attain good rates of economic growth over the past 10 years. During the same period, the traditional and small farm sector, with its extremely limited and subsistence oriented credit, has not advanced and may have even regressed. The larger modern farmers as well as the emerging medium-sized farmers have been prompt in adopting new profitable practices and crop enterprises. Undoubtedly, there has been pressure from this group of farmers to expand their operations including purchase or rental of more lands. A study made of land tenure changes in the Rharb Plain from 1965-70 showed land in modern Moroccan-owned farms increasing from 6 percent of the total land to 25 percent (Appendix table A-3). The average farm size in this category increased from 200 to 270 hectares. Most of this expansion came about by Moroccans purchasing foreign-owned land. However, during this same period, the percentage of total farmers without land increased from 16 percent to 33 percent.

3. Progress towards other objectives

(see under II B. 1.b.)

4. Image

The clients of SOCAP generally regard this organization more as an extension of government welfare than as a credit agency. This feeling as well as the general association of SOCAP with favoritism and improper practices, have given this organization a poor image. On the other hand, the general attitude towards CLCA/CNCA is that it is a solid business-like organization which is doing a reasonably good job. Dissatisfaction is prevalent among the smaller and marginal farmers because of their lack of access to the bank. Confidence by the IBRD in the organization has been reflected in their giving strong financial support to CNCA (just accorded it the 2nd major loan in six years). However, this support has been confined to the CNCA's credit operations for medium and large farmers.

B. Evaluation Procedures and Feedback

Thus far, there has been little or no evaluation of program performance by the organizations concerned such as: effect of credit on farm production, incomes, capital formation, employment and consumption. For coordination and evaluation, the programs rely on periodic meetings of administrative and management committees at the national and provincial levels. Farmers are often included at these meetings in addition to officers from the Credit Bank, Extension Service, Ministries of Finance, Interior, and Agriculture. Constructive criticism from the grassroots elements when involving requests for minor changes in policy and procedures has reportedly been promptly acted upon. An example of this is the simplification of loan procedures making it easier and less time consuming for a farmer to get a loan.

C. Problems

1. Government level

The major problem of small farmer credit usually cited in governmental circles is the scarcity of capital resources that can be devoted to the program. A major share of agricultural investment by the Government has gone towards building infrastructure, large dams, and irrigation works. It appears that external financing for this type of investment has been easier to obtain than that for small farmer credit programs. There has been recently a growing recognition of the possible imbalance in the allocation of resources. However, thus far any shift in emphasis away from large scale investments has been confined to the planning stage.

2. Agency level

The problems of SOCAP are in large measure related to its loosely structured organization (described under II-C). It has suffered in recent years from a poor image, lack of trained personnel, inadequate technical supervision, and lack of funds (due in turn from poor repayment of loans).

The major problems affecting CNCA/CLCA have included, a) establishment of a viable institution from the remains of the complex pre-1962 credit system, including the inheritance of overdue and uncollected accounts; b) obtaining exterior financing to enable a rapid increase in volume of credit and number of clients served, and c) recruiting and training personnel to administer adequately the credit program.

These problems are largely in the process of being solved. Sizeable loans have been obtained from the World Bank for medium and larger farmer credit. However, the CNCA is presently concerned about additional funds for reaching a larger number of smaller farmers through the CLCA.

In recent years CNCA has received a high priority and choice in the selection of agricultural university graduates to help fill its personnel needs. The result of this, along with an active in-service and overseas training program and better salary levels, has contributed towards an elite group of competent and motivated employees.

3. Farm level

Major problems of credit at the farm level include:

- a) Meager proportion of smaller farmers reached by credit programs.
- b) Insufficient amounts of credit per farmer, due largely to basis on which amount of credit is determined: fiscal revenue, which is based on farm size rather than on productive capacity of investment for which loan is made. The fiscal revenue concept is also static since it is based on 1960 prices.
- c) Farmers lack education and training in the use of credit as well as information on availability.
- d) Limited technical assistance to support credit: a well designed "Production-marketing package" possibly with an element of risk sharing or "innovation insurance" for certain plans.
- e) Difficulty of farmers in some regions to integrate or plan their farm organization (without managerial or financial counseling) due to number of production programs, i.e. sugar beets, cotton,

oilseed production etc., which are not well coordinated to complement one another perfectly.

- f) Lack of incentives for farmers not owning land since share arrangements do not leave him sufficient margin above costs of purchased inputs.

- g) Amount of time and paperwork required to get credit (SOCAP)

D. Conclusions about Small Farmer Credit

1. Major Problems of Small Farmers and
2. Role of Credit in meeting these problems

Land tenure - (insufficient size of holdings, lack of land titles, fragmentation of land holdings, much of land collectively owned.) In the past, credit has made a limited contribution towards lessening land tenure problems but is now beginning to expand its role. This is taking the form of financing the development of the resettlement farms which are being carved out of the recuperated foreign held farms as well as redistribution of land in the new irrigated perimeters. Furthermore, under the Agricultural Investment Code[1/] subsidies and credit will assist in the consolidation of small scattered holdings and creation of viable plots. However, it is possible that gains by the larger farmer, who has received the major share of credit, may have offset the above as cited under III A.2.

Marketing and Risk

Although not as great a problem as in some developing countries, marketing does present some difficulty to the small Moroccan farmer. This is true mostly with higher return specialty crops and livestock enterprises which he needs to engage in for expanded employment and income given limited land holdings. Credit programs in Morocco thus far have not involved integration of marketing with production in these more intensive enterprises. There are special harvest loans which are very short term but serve to finance costs of harvesting so that the farmer is not forced to sell or share his crop on unfavorable terms. However, the majority of small farmers do not receive credit and therefore do not benefit.

1/ The Code is a compact between the Government and the land owners and farmers, indicating the responsibilities of both in land development, consolidation, registration of titles and utilization. The Code gives preferential treatment to the small land-holder and to cooperatives. This is in support of the Code's declared aid to create the maximum number of viable holdings and to benefit the largest number of families.

Social

Credit programs have possibly had limited effect on ameliorating education, health , housing and communication problems of small farmers. With future expanded credit programs, enhanced incomes should eventually help to alleviate them. Special loans for rural housing are also planned which would represent a direct approach to this problem.

Political

There is very limited participation by the farmer in developing farm policy. Planning and Programs have traditionally been from "the top down" in a strongly centralized governmental structure. Credit could not be expected to plan an important role in improving this except in a limited and indirect way and over a protracted period. This would be via the route of increased rural incomes -- better schools and education, grouping together for collective improvement in economic welfare, awakened interest and enthusiasm for community development with accompanied growth in socio-economic and political power within the rural community.

3. Credit and New Technology -

Small Farmer Development

Well programed credit is definitely needed to get small farmers moving to an improved level of productivity and incomes. There are simply not enough savings within the sector for auto-financing. What little there is goes to meet many social demands -- weddings, feasts, education, etc-- as well as increased consumption. Development of the typical Moroccan small holding will involve not only investment in annual production inputs but also the means to intensify production through different crops, irrigation, forage and livestock, etc. The latter will require medium term financing for purchase of special equipment, buildings, and livestock. Other elements including price policy, marketing assistance, applied research, and extension, are equally important to credit both in the adoption and the progressive use of technology. In Morocco, extension activities are a key element for improvement. The extension agent needs to spend most of his time with the farmer in helping to improve his productivity rather than in his office writing reports or processing paperwork involving the logistics of farm supplies.

A small amount of applied research has been started on the potential for reorganization and development of small farms. This has been carried out by the "Service des Essais et d'Adaptation", of the Agricultural Research Division. It consists of a model small farm in each of

several regions of the country. Limited investment in improved practices, new enterprises and intermediate technology have been introduced and their effects on employment and incomes measured. This activity needs to be expanded to assist in guiding future small farm development and making maximum return on investments in credit programs.

4. Conditions for Success or Failure

SOCAP could be considered a relative failure as an agricultural credit program in contrast to the relatively successful CNCA/CLCA. However, it must be noted that SOCAP clients are smaller marginal farmers compared with those of the CLCA. The credit program under SOCAP would also probably have fared better had it enjoyed an organizational status separate from the local governmental offices. This would have given it more of an image as a lending institution while reducing its susceptibility to questionable practices in allocation and repayment of loans.

The Agricultural Credit Bank and CLCA have developed a sound program of credit for medium and small farmers. Particularly outstanding has been their recruitment of qualified personnel and replacement of foreign expatriate officers and advisors. The Bank was completely Moroccanized as of 1971. However, a major test for this institution will be in helping to modernize the smaller traditional farmer which they will inherit as clients from SOCAP over the next few years.

The improved technologies for which a good part of the credit was aimed at were for the most part potentially profitable. If they did not prove to be so in practice, it was due to poor implementation of the program including the logistics of supplying farm inputs and even more important, deficiencies in supervision and technical assistance associated with the credit.

5. How could the Program be Improved

Any suggested improvements in the SOCAP program would be academic since it is scheduled to be phased out over the next four years and its functions replaced by the CLCA. The phase-out of the SOCAP began as of September, 1972, in one of the major agricultural provinces of the country. Two more provinces are scheduled for the second year, three the third year, and the rest of the country in the fourth year.

Under the reorganization, the CLCA will serve farmers generally having one to 20 hectares of dryland (or .2 to 4 hectares irrigated). CNCA will serve all farmers larger than this.

The following are some suggested changes which this writer feels would assist the small farmer credit program:

1) The extension services in collaboration with CNCA should assist more directly in the formation of farmer cooperatives which would lower the cost of servicing credit to the large number of small farmers. Morever, these organizations could benefit their members in the purchase of supplies, marketing, and savings.

2) Loans should be based less on security and more on ability to repay, based on increased productivity from use of the loan, even if this requires 100 percent financing.

3) The evaluative procedures within CNCA should be improved by adding this function to the Economic studies section or by establishing a separate unit for this purpose. Systems could be developed, possibly using computers, to evaluate the effects of credit on farm production, incomes, employment, and consumption. This would assist in formulating policies on credit and could lead to charging differential interest rates on loans for different purposes.

4) The agricultural research division (DRA), the Extension service (DMV), and the CNCA should cooperatively develop special "package" loans for small farmers. This would involve not only the required production inputs for certain crops or enterprises, but also the cultural and management practices needed for optimum results and profitability.

5) Additional field agents should be recruited for CNCA and special training given to them in preparation for working on small-farmer credit programs. The training should include the economics of farm organization and management, marginal analysis, farm budgeting and accounting, marketing, and cooperatives. The goal would be the formation of an elite corps of farm financial planning and management specialists who would complement the technical skills of the extension agents.

6) The Government should directly finance organizations such as SCAM, CMA, recuperated farms, etc. without drawing on CNCA resources. 1/ This would permit CNCA to better service individual farmers and cooperatives. At the least, separate accounts should be kept on each of the organizations with all costs accruing to CNCA chargeable to the Government.

7) In order to mobilize more capital, Governmental regulations should be revised to permit higher interest rates on depositor's savings accounts at CNCA. Promotional efforts should also be made to encourage an increased flow of savings. Also, consideration should be given to selling bonds to the public which might pay three to four percent interest and be guaranteed by the Government.

1/ IBRD recommendation (10, p.17)

8) Careful study should be given to permitting the "Banque Populaire" to make agricultural credit loans in certain regions of the country. This bank is 58 percent owned by the Government and has expanded its operations considerably in recent years. The positive incentive factor of competition should more than offset any duplicative wastes from having two agricultural credit institutions. The Bank could also service the medium and larger farmers' needs leaving the CNCA, as a wholly Governmental institution, free to concentrate its efforts and resources on small farmers. Inducements could be given to the Bank in the form of Government guarantees or insurance on their loans made to farmers; for example, insurance of up to 75 percent of loss from default. This could be part of a special discounting service from the Central Bank on agricultural loans. The borrower would pay a modest insurance fee of .5 to 1.0%.

9) Crop insurance is another program which could be initiated (for both CNCA and the private banks), which would help to make the borrower more creditworthy. Crop insurance helps in the partial mobilization and earmarking of savings as well as an instrument of income redistribution (sharing of losses).

In summary, the CLCA faces a monumental task in the years ahead in helping to transform and modernize the mass of traditional small farmers and build a stronger rural economy. To be successful in this, it will need to relax in some measure its somewhat conservative banking manner and adopt a more development oriented philosophy. As a young, dynamic, and growing organization, its chances of accomplishing this are promising.

IV. ROLE OF TECHNICAL ASSISTANCE

A. Donor Inputs

The major part of technical assistance to agricultural credit in Morocco has come from France with a minor role played by U.S.A.I.D. Capital assistance has come predominantly from the IBRD and IDA, and has been used mainly for medium and large farmers and institutions. The Agricultural Credit Bank -CNCA- received an estimated 40 to 50 man years of technical assistance (Credit officers and advisors) since its inception in the early 1960's until termination of this assistance in 1970. Nearly all of this technical assistance was provided by "La Caisse Centrale de la Coopération Economique Française", and the "Fédération des Caisses Régionales du Crédit Agricole." Both are French institutions. USAID provided one agricultural credit advisor from 1962 to 1966. Expatriate officers and advisors were gradually phased out of the Bank staff as Moroccans were trained. The CNCA became completely Moroccanized in 1971.

Training of Moroccan staff is given in-country as well as in other countries, largely European. USAID provided a total of about 32 man/months of short-term training in the U.S. for 14 Moroccans from 1964 to 1970 in agricultural credit banking and farm loan and land appraisal. An additional 35 man/months of training in agricultural cooperatives was provided to 21 Moroccans during the same period. Training given in other countries and by other donors could not be quantified but is believed to have been substantial, especially for long-term University level training in France.

The IBRD made a $10 million loan to CNCA in 1965 and a $34 million loan in 1972, including $10 million in credits from IDA. The first loan was for a 3 year agricultural development project, completed in 1969, with a total cost of about $26 million, covering loans to medium and large farmers for farm machinery and equipment; and processing and storage facilities. The 1972 loan will finance a 3 year development program (total cost $69 million) in medium and long-term investments for mechanization of grain farms - 53 percent; development of citrus and winter vegetables - 35 percent; dairy and other livestock operations- 10 percent; and provision of marketing facilities - 2 percent. The IBRD loan to CNCA is at 7.2 percent interest per annum and repayable in 15 years including a 4 year grace period. The IDA loan to the government of Morocco will be passed on the CNCA as capital. The total number of loans will be over 8000 during the 3-year period for investments on approximately 4000 medium and large sized farms.

In addition to the above IBRD-IDA loans, the German State Development Bank - Kreditanstaldt - made a $3 million loan to the CNCA in 1972. Finally, USAID provided $3 million local currency loan in 1967 to a special cereals production credit fund "Operation Engrais", administered by the SOCAP with accounting by the CNCA. This was Title I, U.S. owned local currency. USAID also agreed to the deposit of the equivalent of $21 million in Title IV and development loan counterpart currency (GOM owned) to the fund during the period 1966-70. USAID's technical contribution to the cereals activity has been in the overall program design and in the development of the research and extension component; not in credit.

B. Effects

The above mentioned technical and capital assistance has undoubtedly been instrumental in shaping the organization and policies of agricultural credit in Morocco. The CNCA and subsidiary CLCA are strongly oriented and patterned after the French system of rural banking and credit. The underlying philosophy of its policies seems to be that of a rather conservative banking institution, with emphasis on security of loans. This orientation fits the modern farm sector fairly well. Unfortunately, this sector represents only a small part of the total rural population. There are signs that this "Banking" philosophy may be changing and becoming oriented more towards development; such change in concept would appear to be a necessity if the Bank is to be of major assistance in small farmer development.

C. Recommendations

The Director and officers of the CNCA are rightfully proud of the progress made by the Bank thus far and are confident of future achievements with little or no technical assistance. While admitting that problems exist, they point out that efforts are being made to solve them and that this must largely be done by Moroccans. Donor assistance for training of their staff in other countries is welcomed. Priority in this case should be given to strenghthening the analytical capacity of the Economic studies section (see recommendation 5 under section III-D-5). Special help in cooperative organization and extension supervision for the Ministry of Agriculture would also be timely, providing that the Government seeks such assistance.

The Bank and CLCA will have a continuing need for external capital in carrying out their expanding program for small farmers. In the course of study and review prior to making its loans, the IBRD has suggested some modifications in policies and procedures such as raising interest rates for loans to larger farmers. Most of these have been accepted by the Bank and the result thus far has been continued improvement in its form and functions.

Appendix
Table A-1

AGRICULTURAL LAND USE IN MOROCCO
AND DISTRIBUTION BY OWNERSHIP

	Agricultural Land (Million hectares)				
				Cultivated - 2/	
	Total	Forest	Rangeland and Alfa 1/	Traditional	Modern 3/
Total Land	23.7	5.3	10.6	6.3	1.5
State Owned	8-10	4-5	4	1-2	.2 4/
Collective (tribal owned)	6-7	-	5-6	1 5/	-
Habous & Guich (held by religious groups and land received for military services)	.2	-	-	.2	-
Melk (privately owned)	8	1 *	2 *	3.4 6/	1.3
a. Foreign	.2	-	-	-	.2
b. Moroccan	7.8	1 *	2 *	3.4	1.1

* Estimated

1/ 2.8 million hectares of alfa grass

2/ includes approximately 650,000 hectares under irrigation (approximately half in large project areas)

3/ At the time of independence, nearly .9 million (900,000) hectares of this was held by Europeans. This has since been reduced through expropriation and sale to around 200,000 hectares

4/ This is recuperated land presently being farmed by the State or in the process of distribution

5/ Approximately 500,000 hectares annually seeded

6/ See table A-2 for distribution of land by size of holding

Appendix
Table A-2

DISTRIBUTION OF TRADITIONAL MOROCCAN FARMERS AND CULTIVATED MELK LAND 1/

Size of Holding (Ha)	Rural Households			Area Cultivated		
	Number	Percentage	Cumulative Percentage	No. of Hectares	Percentage	Cumulative Percentage
0	543,284	33	33	-	-	-
0-1	446,412	27	60	236,120	7	7
1-2	233,627	14	74	314,838	9	16
2-6	300,787	19	93	1,139,699	34	50
6-10	70,163	4	97	575,210	17	67
10 plus	55,776	3	100	1,124,624	33	100
	1,650,049 2/	100		3,390,491	100	

1/ The number of traditional Moroccan farmers using State owned, collective, habous and guich lands are not known but are estimated to be approximately half a million.

2/ In addition to these, there are approximately 35,000 Moroccan farmers on melk land in the modern sector with about half of these in the irrigated perimeters and the remainder in the rainfed areas having 20 hectares or more land each.

SOURCE: Nor El Ghorfi, Contribution à l'Edification d'une Politique Agricole, Rabat, 1964.

Appendix
Table A-3

LAND TENURE CHANGES IN THE RHARB PLAIN - 1965-70

	1965				1970			
	Household Heads		Hectares		Household Heads		Hectares	
	Number	%	Number	%	Number	%	Number	%
Traditional								
Without land	8,000	16	-	-	26,000*	33	-	-
Small farms (less than 8 hectares)	36,500	73	90,000	30	35,000	60	85,000	28
Medium size farms (8-20 hectares)	4,500	9	42,000	14	4,500**	7	45,000**	15
Large farms (20 plus hectares)	600	1	48,000	16	500		45,000	15
Modern								
Moroccan owned	100		20,000	6	250		65,000	25
Foreign owned			60,000	20	60		20,000	6
Government			40,000	13			40,000	13

* 6,000 of these are salaried agricultural personnel
** 1,500 of these are settlers on the recuperated lands with 12,000 hectares.

Source: Revue de Geographie #20, 1971, pp.114-124 "Quelques donnes elementaire sur l'evolution des structures agraires dans la plaines de Rharb"

Appendix
Table A-4

PRODUCTION OF HARD WHEAT- DRYLAND MOROCCO (One Hectare)
1970

	A Traditional	B Improved practices	C Improved practices + Rotation
I. Production - quintals per hectare	9	14	18
II. Value of production at $ 8.80/qx. (marginal return)	$ 79.20	$123.20 ($ 44.00)	$158.40 ($119.20)
III. Production costs ($/ha)			
Seedbed preparation 1/	$4.00	$4.00	$11.00
Seed (A-100 kg B&C-125 kg. at $9.00	8.80	11.20	11.20
Fertilizer 20 units Nitrogen		12.00	12.00
40 units Nitrogen			
Chemical weed control		2.00	2.00
Transport 2/	1.40	2.20	3.00
Threshing	2.00	3.00	4.40
Interest on Capital		1.00	1.00
Total (marginal cost)	16.20	35.40 (19.20)	44.60 (29.20
IV. Value added	$63.00	$87.80	$113.80
V. Labor - $1.00/Day inc. food A = 50% harvest, 5 days B = 50% harvest, 7 days C = 50% harvest, 8 days	8.00	11.20	12.80
VI. Net to farmer	$55.00	$76.60	$101.00

1/ A & B - 8 days at $0.50; C- 4 hours tractor at $2.70 = $10.90
plus two days mule at $0.50 = $1.00 + $10.90 = $13.00 or
using better fed mules with improved harness: 10 days X $1.00 = $10.00

$$\frac{10.00 + 12.00}{2} = \$11.00$$

2/ A - 18 qx grain and hay $0.50 x 3 days = $1.50
B - 28 qx grain and hay for 4.5 days at $0.50 = $2.25
C - 36 qx grain and hay for 4 days at $0.70 = $3.00

Source: FAO - PRAM Report - Economique, Tome II, Avril, 1971
PRAM= Projet de Revalorisation de l'Agriculture en Sec du Maroc)

Appendix
Table A-5

CEREAL PRODUCTION
1964-65 = base 100

HARVEST	1966	1967	1968	1969	1970	1971
Durum Wheat						
100 tons	9,228	9,333	20,688	12,250	14,179	16,415
Index	66	67	149	88	102	118
Yield (Qx/ha)	6.9	7.6	14.8	8.4	9.8	10.8
Bread Wheat						
100 tons	2,262	3,351	7,094	3,690	3,826	5,466
Index	59	89	187	98	101	144
Yield(Qx/ha)	6.4	7.8	13.4	7.7	8.4	11.2
Barley						
100 tons	11,948	15,409	34,944	22,045	19,532	25,719
Index	69	89	202	127	113	149
Yield(Qx/ha)	6.7	8.7	16.6	10.8	10.3	12.9
Corn						
100 tons	1,566	2,357	4,152	4,496	3,196	3,899
Index	37	56	99	107	76	93
Yield(Qx/ha)	2.9	5.0	8.3	9.7	6.2	8.6
T O T A L						
100 tons	25,004	30,450	66,828	42,481	40,733	51,499
Index	64	78	171	109	104	132

Source: Ministry of Agriculture, Division of Economics

Appendix
Table A-6

VALUE OF AGRICULTURAL EXPORTS AND IMPORTS

($ Million)

	1965	1966	1967	1968	1969	1970	1971
A. Exports							
Total Agriculture of which:	238.0	245.2	240.6	260.6	284.6	277.0	265.0
Citrus fruit	62.8	67.0	59.2	84.0	77.8	71.4	77.8
Tomatoes	27.4	29.8	35.0	28.8	29.2	35.0	32.6
Potatoes	9.8	11.8	9.4	7.8	5.0	8.0	7.6
Other fresh vegetables	9.6	6.0	8.0	8.2	8.4	9.4	8.6
Canned Fish	14.6	24.4	23.0	26.0	24.8	25.4	29.6
Dried vegetables	17.8	10.8	10.0	0.8	18.8	26.4	17.4
Fruit & vegetable conserves	10.0	10.2	11.8	10.2	13.0	11.2	17.8
Wine	17.2	13.8	12.0	4.8	7.4	8.6	4.6
Fruit & vegetable juices	2.8	4.4	3.8	4.8	7.2	7.6	4.4
Dried fruits	6.8	4.6	6.0	3.6	5.4	5.0	5.4
Other	31.2	27.6	24.2	36.8	40.0	40.8	35.4
Olive oil	0.6	8.8	1.2	1.4	18.2	3.2	4.6
Cotton	5.8	5.8	8.0	3.2	8.8	5.6	4.6
Cork	3.2	3.2	3.6	4.0	4.4	4.2	3.0
Vegetable horsehair	5.4	5.2	4.2	3.8	3.8	4.2	3.2
Esparto grass	1.0	1.0	0.8	1.0	1.2	0.8	1.4
Wool, fur, hides, skin	1.8	1.8	1.4	1.2	0.6	0.2	0.2
Other	10.2	9.0	9.0	12.2	10.6	9.0	6.8
B. Imports							
Total Agriculture of which:	137.8	151.4	156.6	141.0	99.8	135.0	138.6
Soft wheat	15.8	40.4	60.6	43.2	8.0	26.0	48.6
Sugar	52.4	38.4	29.8	23.8	21.8	27.8	29.8
Tea	11.8	12.8	13.6	16.4	20.6	17.8	16.8
Butter & cheese	5.0	5.0	6.4	8.0	9.2	8.8	7.6
Coffee	6.0	6.6	7.2	7.0	6.2	9.8	6.4
Milk	4.6	4.0	5.2	5.2	5.2	5.4	7.0
Tobacco	3.0	3.6	3.4	3.6	5.2	4.6	5.2
Wheat flour	4.6	2.4	3.0	2.0	2.2	0.4	-
Other	11.6	19.0	15.4	14.6	13.0	16.0	18.8
Peanuts & peanut oil	1.0	-	0.6	-	-	-	-
C. Net Exports	100.2	94.4	84.0	119.6	184.8	142.0	96.4

NOTE: Agriculture accounts for about half of total value of exports.

SOURCE: Ministry of Planning and "Office des Changes"

F&A:12/15/72

Appendix
Table A-7

ANALYSIS OF LOANS MADE BY PURPOSE - CAISSE NATIONALE DE CREDIT AGRICOLE (CNCA)

(in $US 000)

TOTAL BY TYPE OF LOAN TO INDIVIDUALS	Fiscal Year 1967	1968	1969	1970	1971
I. Short term					
Seasonal farm inputs	1,060	1,260	2,460	3,540	5,840
Harvesting	20	-	140	80	-
Livestock	360	700	2,000	4,240	8,780
Total	1,440	1,960	4,600	7,860	14,620
II. Medium and Long term					
On-farm improvement	620	640	1,700	1,640	2,500
Tractors and accessories	240	780	2,120	2,760	2,760
Pumps	400	240	360	520	460
Plantations	100	620	1,360	1,080	640
Other	380	860	2,100	1,380	2,100
Total	1,740	3,140	7,640	7,380	8,460
III. Total all types	3,180	5,100	12,240	15,240	23,080
AVERAGE SIZE OF LOAN TO INDIVIDUALS					
I. Short term					
Seasonal farm inputs	640	900	2,080	2,380	2,000
Harvesting	620	-	360	420	-
Livestock	2,080	2,220	3,060	2,880	2,900
II. Medium and long term					
On-farm improvement	740	1,160	960	1,440	1,320
Tractors and accessories	2,640	3,400	3,600	4,240	4,220
Pumps	1,080	1,360	1,800	2,060	1,740
Plantations	760	3,580	5,640	8,640	4,640

Source: IBRD

F&A:12/15/72

Appendix
Table A-8

CREDIT GIVEN BY TERM AND LOAN RECIPIENTS 1970-71

(US$ 000)

Loan Recipients	Short Term	Medium Term	Total	Percent
Individual loans				
CNCA - CRCA	14,625.7	8,446.3	23,072.0	29.0
CLCA	1,424.0	5,294.0	6,718.0	8.4
Partial Total	16,049.7	13,740.3	29,790.0	37.4
Loan for Organizations	39,750.9	1,826.0	41,576.9	51.9
SOCAP (Normal process)	313.3	-	313.3	0.4
Partial Total	40,064.2	1,826.0	41,890.2	52.3
Total	56,113.9	15,566.3	71,680.2	89.7
Fertilizer Program	8,256.1	-	8,256.1	10.3
GRAND TOTAL	64,370.0	15,566.3	79,936.3	100.0

Source: CNCA

Appendix
Table A-9

ANALYSIS OF LOANS MADE BY TYPE OF BORROWER

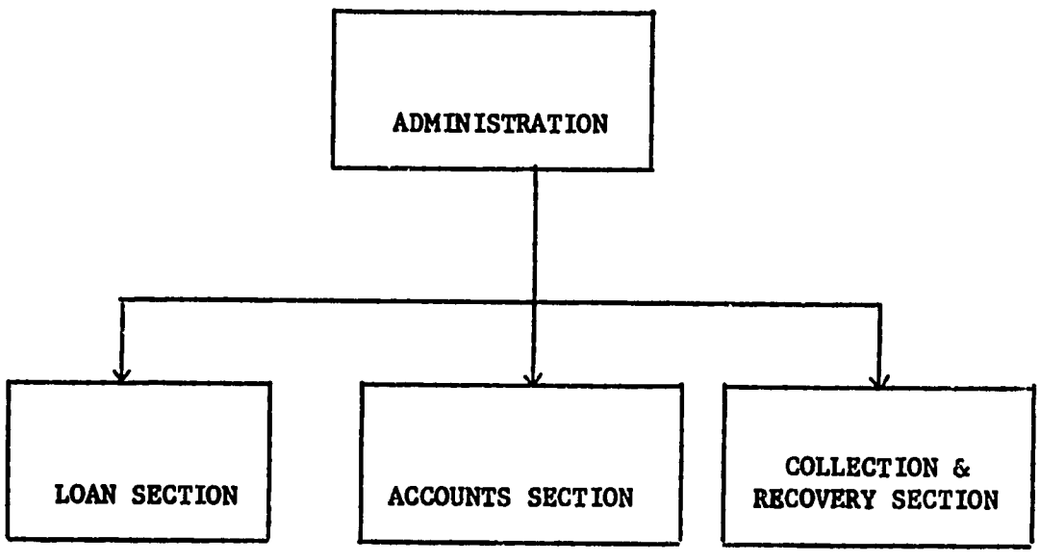
FISCAL YEAR	1967	1968	1969	1970	1971
		(U.S.$ million)			
BY BENEFICIARY (TOTAL)					
Individual farmers	3.9	5.1	12.2	15.2	23.1
Cooperatives	1.4	6.6	10.0	8.2	11.9
Other farming groups	2.2	2.1	2.1	4.8	1.9
Provinces (CGEA)	4.2	15.7	9.2	9.7	*
Other public institutions	10.2	8.9	9.6	24.9	28.0
	21.2	38.4	43.1	62.8	64.9
BY BENEFICIARY (SHORT TERM)					
Individual farmers	1.4	2.0	4.6	7.9	14.6
Cooperatives	1.4	6.6	10.0	8.2	10.8
Other farming groups	1.7	1.5	0.9	2.2	1.3
Provinces (CGEA)	4.2	14.7	7.1	9.0	-
Other public institutions	10.0	8.8	9.6	24.6	2.8
	18.7	33.6	32.2	51.9	54.7
SHORT TERM AS PERCENTAGE TOTAL LOANS EACH BENEFICIARY	%	%	%	%	%
Individual farmers	45	38	38	52	63
Cooperatives	99	100	100	100	90
Other farming groups	75	71	44	45	68
Provinces (CGEA)	100	94	78	93	-
Other public institutions	98	99	100	99	100
	89	87	75	82	84
BENEFICIARIES AS PERCENTAGE TOTAL LOANS EACH YEAR	%	%	%	%	%
Individual farmers	15	13	28	24	36
Cooperatives	7	17	23	13	18
Other farming groups	11	6	5	8	3
Provinces (CGEA)	20	41	21	15	-
Other public institutions	47	23	23	40	43
	100	100	100	100	100

*Only $20,000 in 1971 since this involved recuperated land which was being redistributed.

Source: IBRD

Appendix
Figure A-1

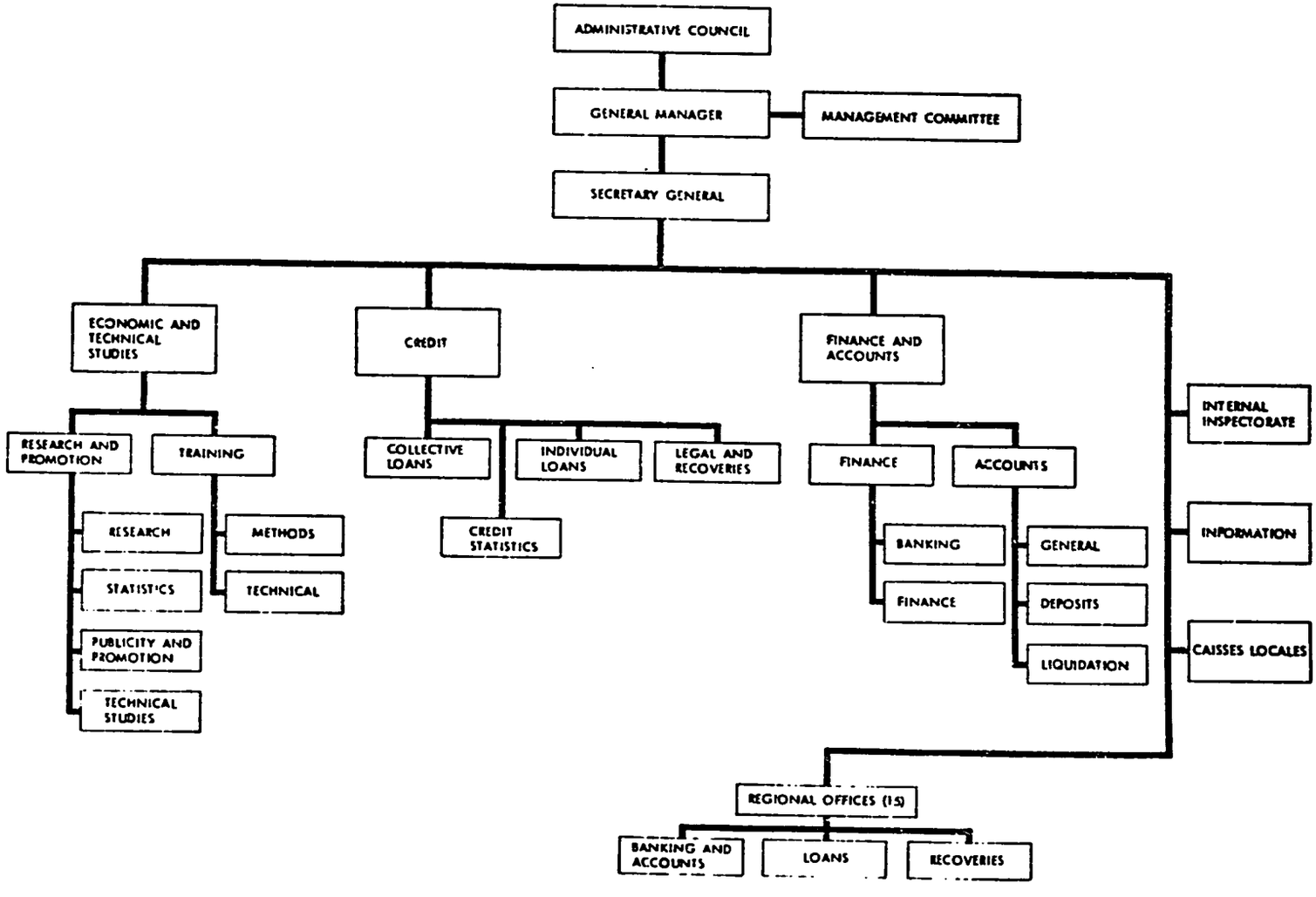
ORGANIGRAM OF A CLCA



Source: CLCA

MOROCCO
AGRICULTURAL CREDIT PROJECT

ORGANIGRAM
CAISSE NATIONALE DE CREDIT AGRICOLE (CNCA)



IBRD-3646(R)

Source: IBRD

Appendix
Figure A-2

BIBLIOGRAPHY

1. American University, Foreign Areas Studies Division. Area Handbook for Morocco, DA PAM No. 550-49, 1965.

2. Banque Nationale pour le Développement Economique, Rapport Annuel 1971, Rabat.

3. Carner, George, Morocco's Agrarian Reform Picks Up Pace. Paper under preparation.

4. CNCA., Annual Reports, 1965-1971.

5. Corty, F.L. Cereal Production and Marketing Procedures in Morocco, USAID/Morocco, April 1967.

6. El Ghorfi, Nor. Contribution à l'Edification d'une Politique Agricole, INRA, Morocco, Ministry of Agriculture, 1964.

7. Emerson, James P. Agricultural Development in Morocco, USAID/Rabat, April 1964.

8. Food & Agriculture Organization of the United Nations, Dossier "Economie" Tome I, FAO-PRAM (Projet Revalorisation de l'Agriculture) U.N.D.P., 1971.

9. Holmgreen, E.W., Tyson, C.J. Jr., and Williams, D.W., Morocco - Evaluation of Agricultural Development, USAID/Morocco June, 1962.

10. International Bank for Reconstruction and Development, Morocco: Second Agricultural Credit Project, June, 1972.

11. International Bank for Reconstruction and Development, Economic Developments and Prospects in Morocco, September, 1970.

12. International Bank for Reconstruction and Development, Current Economic Position and Prospects of Morocco, September, 1971.

13. Johnson, Edwin C. Agricultural Credit in Morocco, U.S. Operations Mission to Morocco, Rabat, 1958.

14. Kelso, T.M., McKnight, R.E., Nevins, J.L., and Russel, D.A., Morocco- Role of Fertilizer in Agricultural Development, Tennessee Valley Authority, 1967.

15. Le Coz, Jean, Le Rharb, Fellahs et Colons, CNRS, Paris, 2 Tomes.

16. Morin, Valier E. Agriculture Cooperative Credit and Marketing, Airgram 608-11-140-037. USAID/Morocco, Rabat, Morocco, 1966.

17. Noin, Daniel, La Population Rurale du Maroc Presse Universitaire de France, 2 Volumes, 1970.

18. Schwanke, Roland K. Economic and Production Analysis of "Operation Engrais" (in selected areas), USAID/Morocco, July, 1967.

19. Stanford Research Institute. Analysis of Selected Programs for Moroccan Agricultural Development, Menlo Park, California, October, 1967.

20. _____. Planning for Agricultural Development in Morocco, Menlo Park, California, March, 1966.

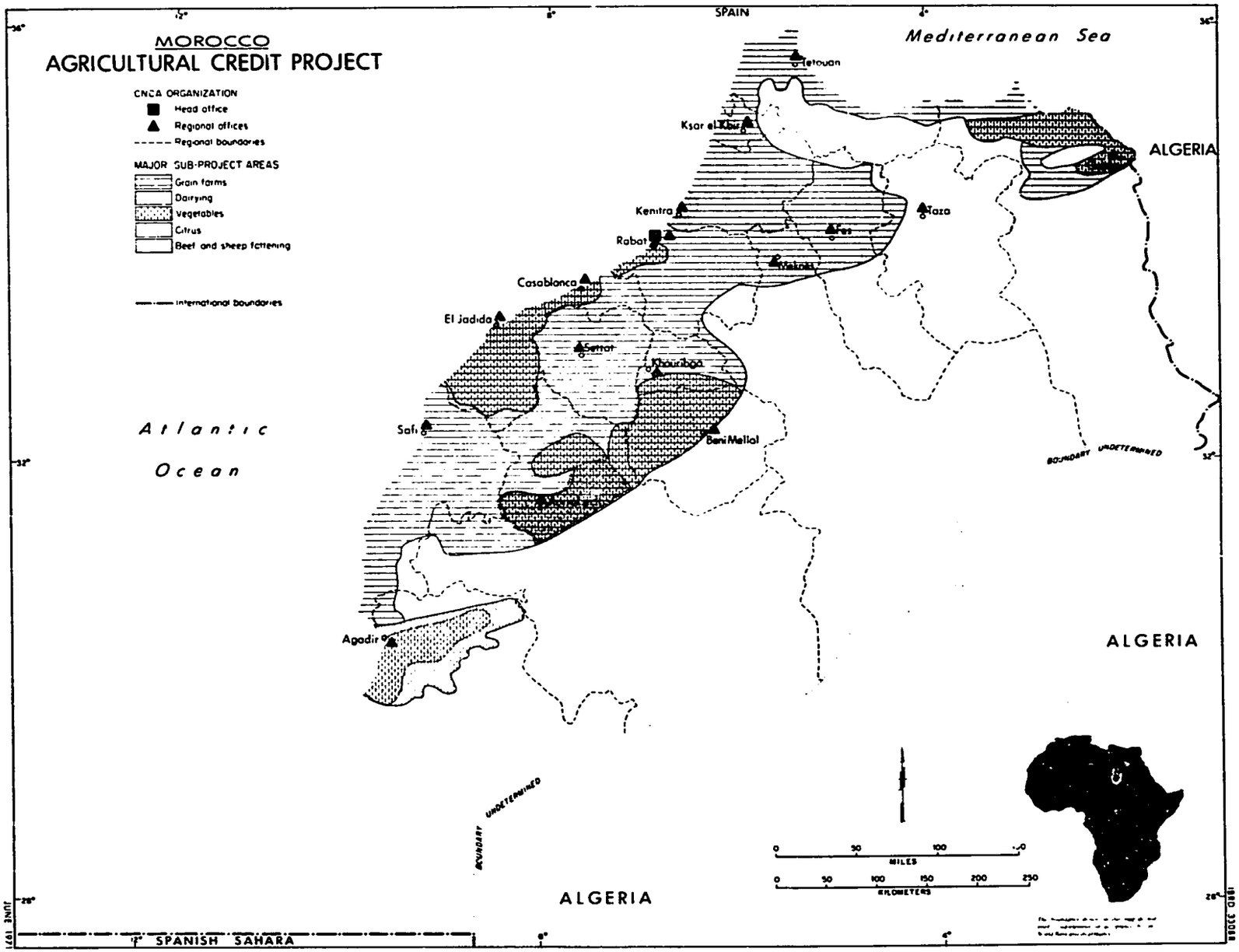
21. Ulsaker, Norman, Land and Agrarian Reform in Morocco, Airgram - Rabat A-111, 1971.

22. Ulsaker, Norman, Small Farmer Development and Credit in Morocco, Unpublished paper.

23. U.S. Agency for International Development, Country Field Submission and Development Assistance Programs-USAID/Morocco, Annual Issues, FY 1959-FY 1973, Washington, D.C.

24. U.S. Agency for International Development, Agricultural Sector Loan Papers, USAID/Morocco, FY 1968-FY 1970, Washington, D.C.

25. Villeneuve, Michel, La Situation de l'Agriculture et son Avenir dans l'Economie Marocaine, Paris, 1971.



SOURCE: IBRD

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COUNTRY PROGRAM

THE LOCAL MUTUAL CREDIT UNION SYSTEM

AND

SMALL FARM CREDIT IN TUNISIA

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by:
William F. Johnson
Agricultural Economist
USAID/Tunisia

Tunis
December, 1972

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AGRICULTURAL CREDIT:

THE LOCAL MUTUAL CREDIT UNION SYSTEM

AND

SMALL FARM CREDIT

IN TUNISIA

I. DESCRIPTION OF TUNISIA'S INSTITUTIONAL CREDIT SYSTEM

A. The National Monetary System

Tunisia's agricultural credit system is integrated into its national monetary system. The latter consists of the Central Bank of Tunisia, 13 banking institutions, the Postal Checking system, and the National Savings Fund. The Société Tunisienne de Banque (STB) and the Banque Nationale de Tunisie (BNT), previously the Banque Nationale Agricole (BNA), are the two most important banks to the Tunisian economy. They provide more than two thirds of the total credit to the economy and receive approximately half of the total deposits. In addition, there is an investment bank, Société Nationale d'Investissement (SNI), concerned primarily with investments in industry, seven private money deposit banks, and three foreign banks. Finances for the two principal banks, STB and BNT, originate from Government sources, foreign loans and grants, deposits and rediscounts by the Central Bank.

B. The Central Bank And Fiscal Policies

Operations of banking institutions in Tunisia were codified in Law 67-51, December 7, 1967, and Law 67-50, establishing the National Credit Council. Principal controls rest with the Central Bank of Tunisia. The Central Bank of Tunisia implements the Government's financial and fiscal policies for the country. It serves as the Government's repository and apex and policy institution for banks in the country.

Controls which the Central Bank exercises on other banks are: interest rates on loans and deposits; solvency ratios (ratio between capital plus reserves and deposit liabilities); liquidity ratios (ratio of assets to short-term liabilities); ratios between deposits and credit extended; and rediscount ceilings (ceilings of amount of loans that the Central Bank will rediscount for other banks). Central Bank approval is also required on any single loan above TD (Tunisian Dinars) 50,000 on non-rediscountable loans and TD 5,000 on discountable loans. This loan control has been pointed out as a serious investment constraint. 1/

Rediscount ceilings allowed by the Central Bank vary according to type of loan and length of its terms. These are changed seasonally in the case of short-term seasonal crop loans. The Central Bank also sets different rediscount ceilings for Government banks (BNT and STB) and private money deposit banks, and imposes a limit on rediscounts for medium term loans. The Central Bank rediscounts loans up to the ceiling set for the particular institution. In the case of rediscounts of loans made by private banks, the Central Bank requires that about 10 percent of their loans be for investment purposes (medium-term loans). The rediscount rate paid by the Central Bank runs about 1 percent.

A National Credit Council was established by Law 67-50 of 1967, but it never functioned until May 1971. Its principal function was to set guidelines for volumes and distribution of credit according to the Government's plan. At its first meeting, the Council discussed measures for encouraging savings through improvements in interest rates. Low interest rates on time deposits had been considered a disincentive to private savings. The Council also discussed means of increasing medium-term credit facilities for producers, and considered overall credit requirements for 1971. Thus, the role of the Council is an advisory one.

The Central Bank acted on the Council's recommendations concerning interest rates and increased the maximum interest rate paid on time deposits (in excess of 2 years) from 4 % to 5 1/2 %. Interest rates on time deposits for periods less than two years were also raised, the minimum being 1.75 % for a minimum of three months. On the average, there was a 1.0 % increase in interest rates.

C. The National Bank of Tunisia (Banque Nationale de Tunisie) 2/

1. Legal Framework

The BNT, Tunisia's second largest commercial bank, was established on June 1, 1959, as the BNA to replace a variety of agricultural organizations created under French rule and operated by the French. BNA's name was changed in 1969 to BNT. The Government of Tunisia owns 51 % of the stock in BNT directly or through Government-controlled corporations, and private interests own 49 %. Following was the distribution of ownership of its TD 1,600,000 paid-in capital at the end of 1971:

Tunisian Government	25.0 %
Government-controlled (26 %)	
Cooperations and Cooperatives	35.7 %
Local Credit Unions (mutual credit)	23.7 %
Private citizens	15.6 %
Total	100.0 %

The Tunisian legislators had three objectives in mind in establishing BNA.3/They were:

(1) to unify the distribution of agricultural credit which, until that time, had been carried out by three institutions: The Tunisian Provident Funds, the Real Estate Fund, and the Agricultural Mutual Credit Fund;

(2) to give priority to the banking aspects of agricultural credit;

(3) to have available a tool for the implementation of its economic and social development policy for agriculture.

The legal framework for BNT's operations for the Government of Tunisia's developmental programs is contained in the Agricultural Development Act of May 27, 1963, and a Protocol Agreement, dated November 13, 1963, signed between the Government and BNT, charging the latter with establishing loan and grant funds from resources furnished by the State and administered in close collaboration with the technical divisions of the Ministry of Agriculture. This program was planned in the first three-year Agricultural Development Plan (1963-1965).

BNT has 11 regional branches in the principal agricultural and commercial regions and 3 branches in the Tunis area, or a total of 14 branch banks. BNT is governed by a Board of Directors appointed by the Government and approved by the General Assembly.

BNT's quotas on discounts is regulated by the Central Bank. In 1969, the Central Bank established a general rediscount limit on loans (cote normale) for BNT in the amount of TD 1.2 million. This limit has not changed, and remained in effect in January 1972. For 1971, additional rediscount limits were allowed BNT for specific crops (cote saisonnière) for short term credit as follows:

Cereals	TD 5.00 million
Olives	TD 1.60 million
Viticulture (wine grape)	TD 1.25 million

(Official rate of exchange in November 1972 was:
1 U.S. Dollar = 0.471 Tunisian Dinar)

Rediscounting of loans for fruits and vegetables was allowed under the general rediscount levels.

BNT's solvency ratio was increased by the Central Bank on November 30, 1971 to 15.5 % from a previous level of 10 % minimum. This was due to an improvement in BNT's reserve position. Its capital reserve assets on October 31, 1971 were TD 867,301 which was TD 160,752 above the level in 1970. BNT's liquidity ratio was lowered slightly on November 30, 1971 to 58.47 % from 60 %.

In addition to its own banking activities, BNT supervises, assists in management, and helps support 45 Caisses Locales Du Crédit Mutuel (local mutual credit unions) in the mutual credit program for small farmers and small entrepreneurs in agricultural activities. BNT also manages the account of 23 corporations on a commission basis.

2. Record Of Agricultural Lending 1962-1971

a. Agricultural Lending Criteria Based On Land-Ownership

Criteria for short-term loans is established by BNT (except interest rates), primarily. The Minister of Agriculture determines the general criteria for medium and long-term loans, since these are Government financed. However, BNT is administering these loans. Therefore, there are some aspects which are common in the criteria. BNT and other banks use a fundamental agricultural credit criteria of land and other property ownership as collateral. Collateral is required in the form of landownership or equipment title, or crop lien, depending on the type of loan. Proof of landownership is required for any type of agricultural loan, except loans to cooperatives on state lands. This property ownership requirement excludes about 90 % or more of farmers from credit from BNT (or other banks).

There are probably no more than about 5,000 to 10,000 farmers who have ownership titles to their land. BNT grants about 4,000 loans to private farmers in any one year; this being the record set in 1971. However, there are a few private farmers in the medium and large categories who have titles to their farms and do not want credit. Most farmers who have ownership titles to their land are the more affluent,politically important persons who were granted this favor during the French occupation (1885-1956), or who have exercised the necessary political influence subsequently to maintain private ownership in face of state collectivation of land.

Since the change in policy of the Government in 1969 away from collectivization and favoring the coexistence of the private, cooperative, and state sectors, there is pressure to increase cadastral surveys and land registration for granting titles of land to private individuals who have the use of agricultural land. The process is complicated by the tradition of land use in Tunisia.

The system of fee simple, freehold ownership of land was introduced during the French occupation. The French applied this system to the land that they took over, which was the best in the country. They found that there was no title, or proof of private ownership of this land in terms of the fee simple system. The land was either common land, large estates of sheikhs and beys, or private and church 'kabous' (estates). The private kabous are controlled by an extended family system. Common land was used by community consent. This sector still comprises some 2.0 million hectares of land in Tunisia (see Table 1). The land which the French held was taken over by the

Table 1

Breakdown Of Lands By Type Of Ownership

BANQUE NATIONALE DE TUNISIE

Type of Ownership	Area (1000 hectares)	Actions provided for under the next Plan
1. Common lands	2,000	Private allocation under Law 7/71 dated Jan. 14, 1971.
2. Private lands		
a) Registered, including forests	2,500	
b) Traditional	2,000	These will be covered by free compulsory registration under Decree-Law dated Feb. 10, 1964.
3. State lands		
a) Integrated farms Number = 25	115	To be maintained.
b) Prod. Coop. Units Number = 218	210	To be maintained.
c) Lands to be sold	505	To be either allocated, in exchange, to Public or Para-public Departments and public bodies, or subdivided. Law No. 7-25, dated May 19, 1970 and Decree No. 70-199 dated June 9, 1970, relating to the conditions for transfer of State farm lands.

Source: Ministry of Agriculture
January 1972

Government. The area amounted to about 830,000 hectares in 1964 when this land was taken over. There remains about 725,000 hectares under State control. The Government has distributed and rented the balance. Its goal is to distribute 530,000 hectares of the original 830,000 hectares.

The Government is attempting to effectively establish a free hold system of private ownership of land in Tunisia with land surveys, registration and issuance of ownership titles to replace the private kabous and common lands as much as possible. The church kabous was broken up in 1956. Obviously, the Government faces social and political difficulties in carrying out such goals, as well as a tremendous administrative job of surveying and registration. The task will take years. As a temporary measure for credit purposes, the Government has issued certificates of land use rights. But commercial banks do not recognize these as ownership titles, qualifying holders to credit.

The Ministry of Agriculture reported to USAID in January 1972 that there were 2,500,000 hectares of land that had been registered as private ownership (see Table 1). However, certificates of ownership have been issued on a small portion of this land. The Ministry also reported that there were 2,000,000 hectares classified as "traditional" land. The Government plans to retain 115,000 hectares of the remaining 725,000 hectares of state lands for demonstration farms, and 210,000 hectares for the production cooperatives.

b. BNT's Short-Term Credit Criteria

BNT's lending criteria has been developed to serve medium and large farmers whose net worth is represented in landownership, which is proved by ownership title. Equipment owned by a farmer and a lien on his crop also serve as collaterals. The latter are used in particular for short-term loans. But the ultimate guarantee is in landownership. Also BNT requires crop insurance to cover possible losses from hail and fire.

The minimum size of a short-term loan which BNT will grant is TD 500. For loans smaller than this amount, farmers must go to their local credit unions (Caisses Locales Du Crédit Mutuel), which grant loans between TD 50 and TD 500. A BNT minimum loan of TD 500 serves only a minimum, medium-size farm. While BNT does not have an absolute limit of minimum farm size for short-term credit, the minimum loan size is the determing factor.

BNT (and local credit unions) finance by short-term credit only about one third of a farmer's cash requirements for inputs. The balance must be auto-financed, which is another constraint to credit, especially to small farmers.

For determining the amount for each loan in short-term credit, BNT uses a rate factor per hectare for each crop in each major production region, which is based on average estimated cost of inputs per hectare, productivity and revenue potential. The minimum area shown in Table 2 is fairly fixed for cereals, except irrigated Mexican wheat, but is only approximate for other crops. In general, farm sizes below those shown in Table 2 are considered in the small category and are served by credit unions. Note that there is no rate factor shown for livestock. BNT does grant loans for fattening livestock for meat production, but loans are granted to the same "clientèle" who engage in diversified farming and receive loans for other purposes.

c. Short-Term Credit Record Of BNT 4/

During the first few years of BNT's operations, agricultural lending (short-term loans) was shared by BNT and other banks, some of which were branches of foreign banks. However, the part shared by other banks began decreasing in the early 1960's. In 1962, BNT lent TD 3.900 millions in short-term credit; and other banks lent TD 1.800 millions, or 68.4 % versus 31.6 % (see Table 3). In 1965, the total amount of short-term credit rose to TD 7.500 million, of which BNT provided 88.0 % and other banks provided 12.0 %. In 1970, total short-term credit rose to TD 23.000 million of which BNT provided 88.7 %. There appeared to be a trend, started in 1971, of an increasing share of the total credit being provided by other banks, although still small.

From 1965 through 1971, BNT extended a total of TD 40.087 million in short-term agricultural credit to cooperative and private farmers (see Table 4). Of this amount, TD 11.432 million went to private farmers and TD 29.255 million went to cooperatives. There was a sharp increase in short-term credit to private farmers over cooperatives in 1971 as compared to 1970. In 1970, TD 2.217 million went to private farmers and TD 4.630 million went to cooperatives. In 1971, TD 2.431 million went to private farmers and TD 0.857 million went to cooperatives.

d. BNT's Medium And Long-Term Loans 5/

BNT's medium and long-term loans are financed from two special funds supplied by the Government, from rediscounted loans from the Central Bank, and from loans supplied by the United States, West Germany, and the International Bank For Reconstruction And Development (IBRD). The two special funds are the "Fonds Spécial de Développement de l'Agriculture" (FOSDA) and the "Fonds Spécial Agricole" (FSA). USAID has contributed to both these funds with counterpart funds and 104(g) loans.

Table 2

Rate Per Hectare For Determining Short-Term Credit For Specific Crops

BANQUE NATIONALE DE TUNISIE

Crop	Method of Cultivation	Region	Rate TD* p. Ha.	Approx. Minimum Hectares/Farm
Citrus	Irrigation	Cap Bon	90	5
Olives	Dry-land	North	15	30
Olives	Dry-land	Sfax, Kairouan	0.450 per tree	1000-1200 trees
		Zarzis		
Olives	Dry-land	Other	0.300 per tree	
Wheat-Barley	Dry-land	North - Good soils	11 to 15	40
Mexican Wheat	Dry-land	North	20	40
Mexican Wheat	Irrigation	North	30	
Legumes	Dry	North	9 to 10	40
Legumes	Winter	North	80	5
Forage	Dry	North	7 to 10	40
Forage	Irrigation	North	25	
Sugar Beets	Dry	North	65	
Sugar Beets	Irrigation	North	90	
Peas (small)	Winter	North	65	5
Artichokes	Winter	North	145(1st year)	5
Artichokes	Winter	North	80(2nd year)	5
Tomatoes	Summer-Irrigated	North	115	5
Pimento green-red	Summer-Irrigated	North	120	5
Early Pimento green	Spring-Irrigated	North	260	5
Early Tomatoes	Spring-Irrigated	North	270	5
Potatoes	Summer-Irrigated	North	120	5
Peanuts	Summer-Irrigated	North	80	5
Spices	Summer-Irrigated	North	9	5
Strawberries	Irrigated	Cap Bon	80	5
Fruits-Almonds	Dry	North	25	
Fruits-Almonds	Irrigated	North	40	
Dates	Irrigated	South	100	5
Livestock		According to Farm Plan		

(Official rate of exchange November 1972 = US$ 1.00 = TD 0.471
The rate of exchange 1965-1971 was US$ 1.00 = TD 0.500 on the average)

Source: BNT
December 1972

Table 3

AGRICULTURAL CREDIT
BANQUE NATIONALE DE TUNISIE

Agricultural Loans (Portfolio End of Year)

Comparative Figures for BNT and Other Banks
(In 1,000 Dinars)

	BNT 1/	(%)	Other Banks	(%)	Total
1962	3,900	68.4	1,800	31.6	5,700
1963	3,800	77.5	1,100	22.5	4,900
1964	4,400	71.0	1,800	29.0	6,200
1965	6,600	88.0	900	12.0	7,500
1966	8,900	83.2	1,800	16.8	10,700
1967	10,000	62.9	5,900	37.1	15,900
1968	14,600	69.5	6,400	30.5	21,000
1969	19,900	91.7	1,800	8.3	21,700
1970	20,400	88.7	2,600	11.3	23,000
1971 (to June 30)	23,000	92.0	2,000	8.0	25,000

1/ In addition to loans from its own resources, BNT's balance of loans outstanding from special (Government) funds during the 1965/71 period have averaged about TD 11 million.

Source: BNT
January 14, 1972

(Official rate of exchange November 1972 = US$ 1.00 = TD 0.471
The rate of exchange 1965-1971 was US$ 1.00 = TD 0.500 on the average)

Table 4

AGRICULTURAL CREDIT
BANQUE NATIONALE DE TUNISIE

Yearly Agricultural Lending Operations (Loans Approved)
(In 1,000 Dinars)

(Official rate of exchange November 1972 = US$ 1.00 = TD 0.471
The rate of exchange 1965-1971 was US$ 1.00 = TD 0.500 on the average)

	1965	1966	1967	1968	1969	1970	1971	Total
Short Term								
Individual	1,687	1,660	1,326	1,148	963	2,217	2,431	11,432
Cooperatives	2,853	2,561	5,377	6,375	6,602	4,630	857	29,255
Subtotal	4,540	4,221	6,703	7,523	7,565	6,847	3,288	40,087
Medium & Long Term								
Individual	361	830	455	491	255	1,846	2,695	6,903
Cooperatives	1,708	1,831	2,571	5,624	2,988	2,878	1,449	19,049
Subtotal	2,069	2,661	3,026	6,115	3,213	4,724	4,144	25,952
Total	6,609	6,882	9,729	13,638	10,778	11,571	7,432	66,639
Individual								
Short Term	1,687	1,660	1,326	1,148	963	2,217	2,431	11,432
Medium Term	361	830	455	491	225	1,846	2,695	6,903
Subtotal	2,048	2,490	1,781	1,639	1,188	4,063	5,126	18,335
Cooperatives								
Short Term	2,853	2,561	5,377	6,375	6,602	4,630	857	29,255
Medium & Long Term	1,708	1,831	2,571	5,624	2,988	2,878	1,449	19,049
Subtotal	4,561	4,392	7,948	11,999	9,590	7,508	2,306	48,304
Total	6,609	6,882	9,729	13,638	10,778	11,571	7,432	66,639

Source: BNT
January 14, 1972

A U.S. DLF loan of $ 5 million for 15 years was made in 1961, disbursement of which was completed in 1967. In 1966, IBRD granted a medium term loan of $ 15.0 million through BNT to cooperative production units of the north. This was reduced later to $ 8.0 million. IBRD made another loan of $ 7.0 million to BNT in 1971 for loans to cereals farmers in the north, and for the dairy and date industry.

(1) The FOSDA

The FOSDA was established in BNT in 1964 under the Agricultural Development Law of 1963. It was to be used to implement the Government's Agricultural Development Policy through medium and long-term investment credit to farmers and fishermen. Funds were to be used for: land conservation and improvement; development and improvement of animal fodder crops; improvement and expansion of citrus; other fruits and olives; expansion of livestock production; digging and equipping of wells; construction of irrigation facilities on farms; agricultural equipment; and fisheries equipment and boats.

Loans were combined with a percentage of the investment requirements in subsidies, varying according to use and borrower. Also, a percentage of investment requirement had to be auto-financed. This likewise varied according to use and users. Until the change in politics against socialized cooperatives in 1969, all conditions of loans, auto-financing, and subsidies favored cooperatives. In fact, cooperatives could obtain loans with zero to 5 % auto-financing, and could obtain a full 20 % in subsidies. Therefore, it is not surprising that 90 % of FOSDA loans went to production cooperatives before 1969.

The Agricultural Development Law was amended in 1970 and 1971, giving private farmers and fishermen almost equal rights to cooperatives in borrowing in terms of auto-financing and subsidies. Private farmers can now obtain from 85 to 90 % of investment requirements, depending on use, in loans, and subsidies.

BNT administers FOSA, but the Ministry of Agriculture's technical staffs inspect the farming, or fishing operations to check on the feasibility of use. The Ministry of Agriculture is the approving authority of loans under FOSDA. The Government assumes 100 % of the risk on FOSDA loans.

There was also a trend favoring private farmers in medium and long-term loans granted by BNT in 1971. Whereas cooperatives received TD 19.049 million in such loans during 1965-1971 against TD 6.903 million for private farmers, private farmers received a greater portion of investment credit in 1971. During 1971, private farmers received TD 2.695 million against TD 1.449 million for cooperatives. In 1970, the situation had been reversed with cooperatives receiving TD 2.878 million and private farmers receiving TD 1.846 million.

(2) Subsidies

The Agricultural Development Law of 1963 allows subsidies on medium and long-term development loans. Before the 1970 amendment to the Agricultural Development Law of 1969, cooperatives could receive 20 % or more of investment requirements in subsidies with auto-financing of zero to 5 %. Private farmers could receive 10 to 15 % in subsidies and were required to auto-finance 15 to 20 % of their investment requirements. The amendments of 1970 and 1971 continued subsidies, varying between 10 % and 30 %, and auto-financing ranging from 10 % to 20 %. The percentage of subsidies allowed on loans for cooperatives and private farmers became equal under the amended laws. However, cooperative production units were required in certain cases to provide only 5 % auto-financing.

During the period (1964-1971), the Government granted through BNT TD 8.927 million in subsidies for agricultural development to augment medium and long-term loans for agricultural development extended by BNT. Most of this went to cooperatives. In 1971, however, cooperatives received TD 16,881 in grants against TD 95,084 by private farmers. These grants were to be used for the same investment purposes as the loans.

e. Losses Under The Socialized Cooperative System

The dissolution of a number of unsuccessful state cooperatives in 1970, following the change in the Government policy against socialized cooperatives in 1969, resulted in losses. It has been necessary for the Government to assume bad and outstanding debts of dissolved and consolidated cooperatives. Through November 30, 1971, the Government had assumed TD 5.521 million of such debts. Of this amount, TD 4.222 is payable to BNT in semi-annual installments through 1976 and the balance will be absorbed by the FOSDA account. This debt repayment was reflected in the Ministry of Agriculture's capital budgets for 1970 and 1971.

f. Summary Of Loans To Cooperatives And Private Farmers In 1971

An analysis of 1971 lending showed that 961 cooperatives and 4,043 private farmers received short-term and medium and long-term credit. While there was an increase in favor of private farmers, the vast majority of farmers in the country did not receive any credit. Private farmers received TD 2.431 million in short-term credit and TD 2.695 million in medium and long-term credit in 1971. Cooperatives in 1971 received TD 0.857 million in short-term credit and TD 1.449 million in medium and long-term credit.

D. Other Agricultural Lending

1. Other Banks

As pointed out above, other commercial banks took a declining share of agricultural credit from 1962 to 1970. From the latter date, the trend appeared to change. Not included among these, but also important indirectly to the agricultural sector, are the STB and the Banque du Sud, both semi-state banks with 51 % Government ownership. While these banks do not lend directly to the agricultural sector, they provide financing to related industries which aid agriculture.

The STB is Tunisia's leading bank, with over 40 % of deposits and credit in the country. It provides credit to industry, housing, commerce, agro-industries, and tourist industries. It also operates several subsidiary companies in these areas. Its only direct agricultural interests concerns a subsidiary operating company in farming 25,000 hectares of leased Government land, which was initiated in 1972. The Banque du Sud operates in southern Tunisia and finances mining and mineral operations, primarily, providing some employment to people of rural areas.

2. Government Agencies And Commodity Offices Providing Loans

Government agencies, commodity offices and cooperatives have provided direct and indirect financing of farming operations through subsidies and loans. However, the amount of credit has been small. Organizations in these categories include: The Office of Development of the Medjerda Valley (OMVVM), the Office of Cereals, the Office of Wine, the Office of Olives, the Office of State Lands, and the Central Cooperatives of Field Crops.

a. The Office Of The Development Of The Medjerda Valley

OMVVM has financed land development programs, irrigation development, farm housing, and resettlement and training of farm families. The operation to date has been estimated to have resulted in the development of 8,000 hectares of irrigated farming and another 7,000 hectares in the process of development for irrigation. The capital inputs for this operation were provided by the Government. There is no breakdown available on these expenditures. It is understood that portions of the costs are amortized in repayments by farmers.

b. Office Of Cereals

The Office of Cereals is a semi-autonomous agency of the Government operating under the aegis of the Ministry of Agriculture. It is charged with the purchase, import, export, storage, and distribution of price-controlled cereals and leguminous grains. This agency, while normally

not in the credit business, has provided short-term credit-in-kind (seeds and fertilizer) to a limited number of farmers. This has usually been of an experimental nature.

c. Office Of Oil

The Office Of Oil is a commodity office which handles the domestic marketing and export of olive oil. It has the responsibility for maintaining price controls of olive oil, and any grants and subsidies to the industry. Subsidies to the olive oil industry are granted where international prices of oil fall below domestic prices and cause losses to domestic producers. This has not occurred yet, because international prices have exceeded domestic prices of olive oil in recent years.

In 1970-71, the Office of Oil initiated a limited investment credit program to encourage olive press operators to improve facilities. It offered press operators TD 15 per ton for construction of new facilities, and TD 5 per ton for repairs. However, the amount of loans totaled only TD 16,000.

d. Office Of Wine

The Office Of Wine has not provided any credit to wine growers, but has distributed Government subsidies to cover losses incurred in exporting wine to Europe. Data on amount of these subsidies are not available, but it is applicable to some 35,000 hectares of wine grape cultivation.

e. The Office For State Land (Office Des Terres Domaniales)

The Office for State Lands (Office des Terres Domaniales, OTD) has responsibilit for administration of State lands and the system of production cooperatives. It started renting some lands after 1969. One rental program involves 336 farmers operating approximately 2,516 hectares of cultivated land and 575 hectares of fallowed land. OTD provides credit for 50 % of the cost of materials to these farmers, and the farmers finance the other 50 %.

f. Central Cooperative De Grand Culture

The Central Cooperative de Grand Culture (cereals and legumes) is a service cooperative serving private and cooperative cereal and legume producers. This cooperative sometimes provides short-term credit to its members while they are awaiting approval of loan applications by BNT.

g. The Local Mutual Credit Unions (Caisses Locales Du Crédit Mutuel

The mutual credit program was started with the establishment of the first local mutual credit unions in Cap Bon in 1963 to handle short-term credit to small farmers. Credit is provided at the established rate of 6 % interest. They provide no medium and long-term loans. Members can open sight and time deposits with their local union. Interest rates are paid on time deposits

at Central Bank rates. Unions can discount certain loans to BNT at 5 % interest.

The number of unions had expanded under the support of BNT to 52 local mutual credit unions in principal agricultural areas by 1970. Financial difficulties forced the merger of 7 in 1970, reducing the number of unions to 45. Membership had risen to 70,000 in 1970 and 77,000 in 1971. Capital reserves and stock assets totaled TD 867,301 as of October 31, 1971. This was an increase of TD 160,752 over 1970.

The credit unions extended TD 13.014 million in short-term credit to farmers, cooperatives and other enterprises from 1963 to December 31, 1971. The number of these loans totaled 92,049. Private farmers received 91,397 and cooperatives received 652 loans. Cooperatives received 1.589 millions in the one year that unions served them (1969). The unions are limited to TD 500 per loan, but can by special BNT permission extend loans above this level. Loans to cooperatives were on the order of TD 4,000 each.

h. Amount Of Short-Term Agricultural Loans BY All Agencies in 1971

All the agencies described above provided TD 4.539 million in short-term agricultural loans to farmers in 1971, (see Table 5).

Table 5

Short-Term Agricultural Credit From All Agencies 1970-71

Local Credit Unions	TD 948,689.000
BNT - Private Sector	1,715,310.000
BNT - Cooperative Sector	669,106.000
Office of Oil	16,000.000
Office of Cereals	516,855.140
Office of Terre Domaniales	8,188.525
Central Cooperative for Grand Culture	534,777.409
Total	TD 4,539,373.074

Source: Ministry of Agriculture
November 1972

The credit provided by all sources has reached only a small percentage of farms in any one year, and most of these are medium and large farms. The percentage is somewhere around 9 % when short-term and medium and long-term credit are considered. It is around 6 % when only short-term credit is considered.

There is no significant non-institutional source of agricultural credit in Tunisia at present, as far as can be determined. Money lending by private money lenders disappeared from Tunisia during the socialized cooperative experience. At one time before this experience, it is said that private money lenders provided about one third of agricultural lending. There are no references known to substantiate this statement.

3. Credit Demand

Agricultural demand for all credit was much greater than the supply of credit in 1971. However, BNT claims that it has met all credit demands of applicants who met its credit criteria. Herein lies part of the problem. Small farmers do not qualify for BNT credit because of the sizes of farms or lack of collateral. Most farmers lack ownership deeds to land or other collateral required. Yet, BNT at the end of 1971, had in its accounts around TD 3 million of FOSDA funds and TD 2.673 million of FSA funds which had not been used for agricultural credit as intended.

For the 11 months ending November 1971 BNT had turned down 5,043 requests for credit in the amount of TD 6.536 million. It actually extended credit to 4,043 private farmers and 961 cooperatives in 1971. The credit unions extended credit to 7,809 borrowers in 1971 and turned down requests from 1,914 applicants for TD 342,000.

The Ministry of Agriculture reported that about 67 % of credit demands for medium and long-term credit were met in 1970-71. This included all demandants: tree planting; farm equipment for cereals and other farming; livestock; poultry; well-drilling; irrigation facilities and equipment; farm buildings; and fisheries. It is doubtful that this represents the real demand, although it may represent the effective demand.4/

E. Agriculture's Share Of Total Lending

Agriculture's share of total lending by BNT and other banks has been small. The overall amount of loans from banking institutions to all sectors doubled during the period 1964-1969, rising from TD 93.4 million in 1964 to TD 197.4 million,1969. Whereas agriculture's share tripled from TD 6.8 million in 1964 to TD 24.78 million in 1970, its overall share remained small: 7.2 % in 1964, 12 % in 1969, and 12.5 % in 1970. Yet, agriculture contributed 25.7 to the GDP in 1964, 15.4 % in 1969 and 15.2 % in 1970.

II. THE AGRICULTURAL MUTUAL CREDIT UNION SYSTEM AND SMALL FARM CREDIT IN TUNISIA (CAISSES LOCALES DU CREDIT MUTUEL)

A. Background

USAID has provided only limited technical assistance in the credit area in Tunisia. It has supplied U.S.-owned local currency for establishing the FSA fund in BNT, as described in Section I. USAID also financed one advisor for three years (1965-1968)to BNT to advise on development of the local agricultural mutual credit unions (Caisses Locales du Crédit Mutuel). This advisor was a French national employed by the U.S. Farmers' Union under a contract with USAID. The concept of a mutual credit system in Tunisia dates back to 1905 under French rule where a number of unions were established and federated by the Agricultural Credit Mutual Fund[6].

The first new experiment with local, mutual credit unions was tried in Cap Bon in May 1963 in the irrigated sector of predominantly small vegetable and fruit farms. At this time, ten credit unions were organized and financed by an initial Government grant of TD 290,000. These unions were responsible to the Ministry of Plan and National Economy. Their purpose was to provide short-term credit to small farmers not served by commercial banks. In 1965, these agricultural credit unions, which had been expanded in number to 14, were transferred from the Ministry of Plan and National Economy to the BNT.

They operated under the BNT informally until 1967 when an official protocol was signed (January 10, 1967) by BNT and the Government of Tunisia (Ministry of Plan and National Economy). The organization of the system was then made applicable to the provisions of Act 64-56, of December 28, 1964, relating to official licensing of cooperatives. Between 1965 and 1967 , the number of unions increased to 41, with an average membership in each union of 1,214 shareholders.

Expansion of the numbers of unions and membership continued until 1970 when there were 52 unions. Financial difficulties which had begun to appear after 1967 forced the merger of seven unions with others in 1970, reducing the total number to 45 with an average membership of 1,711 shareholders per union, and a total membership of approximately 71,000 shareholders.

The following tabulation shows the evolution of the development of credit unions:

14 - local unions in 1965
41 - local unions in 1967
52 - local unions in 1969
45 - local unions in 1971

Membership had risen from 10,704 on May 31, 1965 to 77,000 in 1971.

Credit Unions operate under BNT's lending rules and accounting control. BNT actually maintains cash assets and accounts of the credit unions for a period of five years. BNT operates a central accounting system for all unions. Operating under the BNT rules of lending, as established by the Central Bank, credit unions loans cannot exceed 90% of the union's capital and Government grants, and 60% of deposits. Also, a ratio of shares to loans of 1 to 50 is maintained (in amount).

BNT has a specialized division within its headquarters in Tunis which exercises surveillance over the system, provides a centralized accounting service, and conducts feasibility studies for establishing new unions. BNT also provides a manager from its employees for each union. This manager has no approval authority for loans unless delegated this responsibility by the elected Board of Directors for the union. All these services are required of BNT by the Protocol Agreement of 1967. BNT also discounts loans of certain credit unions (with good lending records) at 5% interest of the 6% interest charged. These loans can be rediscounted by the Central Bank at 4%.

While the unions aim to serve small farmers not reached by BNT, there is some overlap between the unions and BNT in lending as the unions sometimes lend to medium sized farms. Since a credit union's loan is limited to a maximum of TD 500, this amount distinguishes the size of farms, which fall in the small category. A union can, with BNT's approval, make larger loans which serve the needs of medium-sized farms.

Credit unions are authorized to engage in banking activities of handling liquid assets of members. They can conduct savings programs through special savings accounts, fixed deposits and cash certificates, and accept subscriptions to Government issues.

Unions are authorized to pay up to 6% interest on shares, which must be decided by the Board of Director. However, before dividends are declared, at least two-thirds of receipts shall be assigned to reserve funds until such funds are equal to twice the registered capital.

B. Objectives

The stated objective of the mutual credit unions was to provide a mutual banking system for receiving deposits and granting credit to members who share in the liability of the system. The implied objective was to enable the larger and economically weaker segment of the population to have access to banking facilities and individual credit by means of a mutualistic system[7]. In a broader political concept, the credit union movement was initiated by the Government as an element of its policy to organize all national resources into collective systems.

Their articles of incorporation permit an association of membership of commercial, other enterprises and farmers. By the fact that unions are located in small rural villages for the most part, their membership is

predominantly farmers, and their lending is primarily to farmers. Membership is open and is obtained by the purchase of a minimum of one share of stock at TD 5 each and by the approval of the Board of Director. Total shares per individual must be proportional.

C. Organization

Each credit union is organized independently but is tied into a national system through BNT under whose tutelage it operates. For convenience of administration, the unions report to BNT through one of the nearest of BNT's 14 branch offices. There is no direct affiliation between one credit union and another. BNT's headquarters in Tunis provides the national seat for the 45 credit unions and their 77,000 members, and in fact, makes a system out of the individual units. Each local credit union has two regular employees, a manager provided by BNT, and a clerk; although some of the larger ones have three persons.

Membership is obtained by approval of the Board of Directors and the purchase of a minimum of one share of stock at TD 5 per share. No member can hold a number of shares exceeding one-tenth (1/10) of the capital, the aim being to limit the institutional benefits to small farmers. Members can elect to leave the union by sale or transfer of their shares. They can also be expelled by the Board. The amount of registered capital is variable, but there must be TD 25,000 of TD 5 shares each to start a union, and up to TD 20,000,000.

In theory, each member subscribes to a number of capital shares in proportion to the amount of business (in loans) that bind him to the local credit union. In practice, this is not always true. The extent of membership liability is limited and is proportional to the amount of shares a member owns, and the amount of borrowing done. Liability for the latter is an unlimited commitment of the member's estate.

The Board of Directors is elected for a three-year term, with staggered elections annually for each third of the Board. The Board is liable only for the power conferred upon it and individual directors have no personal liability for the union. There can be a minimum of six directors and a maximum of 12, but in multiples of 3. The Board appoints a president, treasurer and secretary. The Board may delegate all or part of its powers to a manager. Board members serve without pay. Their authority includes approval of loan applications, determination of loan collateral, and making contracts.

The general meeting, held annually, selects a Control Commission of three officers from among its members. The Commission's function is to audit books, financial statements, and to check the accuracy of accounts in the Board of Director's report. The Commission can also advise the Board on loan applications of members, the solvency of borrowers and their security, and the utilization of funds by the borrower.

D. Beneficiaries

1. Selection Criteria

The first selection criteria for approving a loan application is that of membership. While the amount of the loan is supposed to be related to the amount of shares owned, this is not followed in practice. According to BNT, selection of loan applications is more related to local politics of the members of the Boards of Directors than to feasibility. Little or no technical feasibility studies are made, according to BNT.

Most of the criteria for lending has been imposed by BNT. First of all, the size of the loan is described for specific crops in specific areas. Within the TD 500 limit, the unions can use the same value factor for small farms, whose sizes would be below those shown in Table 2. The total value of loans should not exceed the cumulative amount of 90% of the union's capital and Government grants, and 60% of deposits. This ratio was exceeded only by 4.8% by the whole system in 1971.

Due to uncertainty of cooperatives after 1969, the credit unions discontinued lending to this sector after 1970. They suffered losses incurred from the cooperative experience in unpaid loans and withdrawal of deposits by dissolved cooperatives. As a result of this change in policy, loans to private farmers increased in 1970 and 1971.

BNT's appraisal of lending policy of local credit unions is that there has been too much local politics in granting loans. There has been little or no examination of the technical feasibility of loan applications, according to BNT. Rather, loans have been granted on the basis of personal and political influence on the Boards of Directors. Local gouvernors and other political figures often exert pressure.

There is no practice of graduating borrowers from the system. In fact, successful borrowers are encouraged to continue to borrow as they maintain the system. However, BNT is exercising more rigid controls now and forcing the unions not to grant new loans where old ones remain unpaid.

2. Terms of Loans

The credit unions grant only short-term seasonal loans at the beginning of a crop season, repayable at harvest. The term of loan credit varies according to the crop season which ranges from three months for some vegetables to nine months for cereals. Most loans provide operational credit to members in farming or commercial enterprises. Unions do not provide medium and long-term loans to farmers. Loans can cover costs of fuel, labor, and materials. Some bad experiences in the dry areas of the center and south of Tunisia, where farming is marginal and dependent on a good rain year, caused BNT to impose a limitation as to crops and areas. Loans cannot be made for cereal production in the south of Tunisia, any more, without BNT approval. There are other marginal areas where lending is restricted.

3. Number and Types

Table 6 shows the record of the number of loans granted from 1965 to 1971 by local credit unions. This represents all loans, agricultural and non-agricultural, the latter being in rural enterprises and handicrafts, which have been a small percent of their total lending. Cooperative loans were granted only in 1969.

Table 6

Record Of Lending Of Local Credit Unions
(Agricultural and Non-Agricultural Loans)

Year	Number of Loans	Total Amount for System	Average Amount of Loans	Remarks
1965	7,759	484,168	64	Represents part of year after BNT took over
1966	14,881	1,380,515	92.7	
1967	19,129	2,054,669	107.4	
1968	14,811	1,930,143	130.3	
1969	10,951	3,682,068	336.2	
1970	17,234	1,889,610	109.6	
1971	8,536	1,593,000	186.6	

(Rate of exchange in 1972 = US$1.00 = TD 0.471,
Exchange rate 1965-1971 was US$1.00 = TD 0.500)

Source: BNT - December 1972

Following was the breakdown of lending between cooperatives and private farmers in 1969:

	Number of Loans	Amount (TD)
Cooperatives	652	1,589,137
Private Farmers	10,299	2,012,921

Records of lending to the non-agricultural sector are not available except for the years 1969 and 1970. In 1969, a total of TD 440,928 in loans was granted. However, TD 417,770 went to the cooperatives and TD 23,158 went to private enterprises. The non-agricultural sector received TD 123,972 in 1971, and all went to private enterprises.

After lending to cooperatives ceased in 1969, the number of loans increased in 1970 to 17,234 all of which went to individuals. The credit unions had resumed their original character of making small loans to private farmers. However, the experience during the one year of cooperative lending had had a bad influence on the attitudes of credit unions toward lending, which caused further deterioration of their financial situation. This attitude continued after the cooperative era as reflected in continued losses of the system. However, the problem lay deeper than the cooperative experience. There were problems within the credit unions and problems on the economics of traditional small farms which are discussed elsewhere in this report (see Section III).8/

4. Profile of Farm Community

The profile of the farm community varies considerably from north to south of Tunisia, as the climate changes and rainfall pattern deminishes southward toward the Sahara. Table 7 shows the number andsizes of farms as estimated by the Ministry of Agriculture.

Table 7

Types of Ownerships and Farm Sizes

Type Ownership	No. of Farms	Area in 1000 Hectares	
Agricultural Land			
A. Private			
1-5 ha.	131,600	304	
5-10 ha.	72,300	507	
10-20 ha.	63,300	879	
20-50 ha.	41,500	1,287	
50-100 ha.	8,000	541	
100-200 ha.	2,600	372	
200-500 ha.	1,150	356	
500- ha.	400	271	4,517
B. Public			
Agrocombinates	25	68	
Pilot, educational farms	-	48	
Northern Co-ops	218	202	
Co-ops in Center and South	347	200	
To be sold to young farmers	-	112	
To be sold at public auction	-	94	724
Subtotal A + B			5,241
Forests			1,240
Extensive Pastures (Tribal Land)			2,550
	Sub-total (productive land)		9,031
Unuseable Land			6,969
	Total area of country		16,000

Source: Ministry of Agriculture Jan. 1972

E. Lending Policies and Procedures

1. Portfolio

Table 8 shows the trend in development of the resources of the local credit unions between 1965 and 1971.[9]

Table 8

Capital Assets and Deposits of Local Credit Unions
(Tunisian Dinars)

Year	1965	1967	1969	1970	1971
Capital	70,368	337,904	632,738	706,524	734,820
1% withholdings from Loans	11,707	50,164	105,200	123,415	139,081
Gvt Grants	290,000	290,000	290,000	290,000	290,000
Deposits	494,605	1,501,790	4,331,976	3,224,916	4,464,175
Total	886,680	2,197,858	5,359,914	4,344,655	5,628,076

(Official rate of exchange November 1972 = US$ 1.00 = TD 0.471
The rate of exchange 1965-1971 was about US$ 1.00 = TD 0.500)

Source: Ministry of Agriculture - November 1972

Government grants are included in the resources shown in Table 8. These were grants to help the first 10 unions start operations in 1963. There have been no further grants to the system since that date. The capital of the unions represents paid-in capital by union members at TD 5 per share with limited liability. The credit union's largest resource is its deposits, as shown in Table 8.

2. Interest Rates

As mentioned elsewhere interest rates on loans are set by the Central Bank. The rate on short-term loans has been 6% for several years for BNT and the credit unions. The interest on medium and long-term loans under FOSDA varies between 3 and 5%, depending on the length of term and use. The rate is 5% for the FSA loan. The rate of discounting of credit union loans by the BNT is 5%. The rediscount rate of the Central Bank is in turn 4% for BNT loans discounted by BNT.

The terms of trade for certain segments of the farm population has shifted unfavorably during the past few years because of increases in price in the industrial sectors and lack of proportional increases in the farming sector[10]. The cereals and olive farmers have been particularly touched because

the prices of cereals and olive oil are controlled. There has not been any change in cereals prices to the farmers since 1967 and little change in olive oil prices. 11/

Whereas, during the same period the wholesale price index increased from 133.8 (1962 = 100) in 1967 to 153.6 in 1971, indicating a rise in inflation of about 20%. Thus cereal and olive producers who use credit for purchasing manufactured farming and transport equipment and fuels are paying an additional premium in real cost above the going interest rate. The cereals project in Tunisia estimates that the cost of mechanical equipment services on a mechanized cereals farm is about 57% of the total operating costs, excluding any hand labor (including equipment operators). If these statistics are reliable, farmers would be paying an additional 12.4% interest on any equipment bought for land preparation seeding, cultivating, fertilizing, treating, and harvesting in cereals production.

This would not be true for short-term credit used for seeds and fertilizers. Seed prices are controlled, and fertilizer prices are subsidized. Also, it would not be true of fruit and vegetable producers whose products are not price controlled. The prices of these products on the domestic market have been rising along with the increase in the cost of living.

3. Collateral

The collateral required is the unlimited liability of the estate of union members who obtain credit. This would include the borrower's crop proceeds and his real and chattel property. However, the liability of union members which is born jointly by reason of commitments of the union toward the State or other third parties is limited to the amount of capital shares owned by each member. The credit unions do not follow the same rigid requirement of title to land as was discussed in Part I.

4. Other Subsidy

Other than the direct development subsidy granted to a few of the unions when they were started, there is no known subsidies which would affect the cost of money to credit union members. Subsidies on medium and long-term investment loans for farm improvement are described elsewhere. These subsidies are not applicable to the credit union system.

5. Appraisal Technique

The control commission, selected at annual meetings, has the function of auditing books annually, advising the board of directors on loan applications, and checking the credit risk of borrowers. BNT reports that in many cases, this commission is not technically competent and does not function in most cases.

F. Collection

1. Repayment Record

Delinquency rates vary considerably by area and time. Complete records are not available, but for unions which are in poor financial straits the repayment rates have been below 50%. A rate of 80% is considered good, which is in contrast to BNT's record of above 90% repayment. The high delinquency rates and defaults are found mostly in the cereal producing areas. Before BNT imposed its limitations on lending by area and crop, credit unions' lending in cereals production in the center and south lost heavily.

Following is the record of the amounts of unpaid loans at due dates from 1966 through 1969:

TD	240,000	on December 31, 1966
	620,000	1967
	913,000	1968
	1,330,000	1969

No totals are available for 1970 and 1971, but in 1970, out of TD715,000 of credit to cereals farmers, TD 367,000 were unpaid as of November 30, 1970, or over 50%.

2. Methods of Collection - Enforcement and Rescheduling

The Credit Unions notify borrowers of delinquencies. The notices continue until the Board of Directors decide that the loan is not collectable and legal action is necessary. At that time, the case is forwarded to the BNT for legal action. There is no group pressure or other measures taken as one would expect of a mutual credit organization. Most unpaid loans are carried forward from year to year as assets, indicating a reluctance of the boards of directors to force legal action for foreclosing. There is no policy for rescheduling loans.

G. Costs and Finances

1. Portfolio Profits and Losses

Table 6 shows that lending increased rapidly from 1965 and reached a peak in 1969. This was the era of rapid increase in the state cooperative movement. With no cooperatives in the lending picture in 1970 and 1971, the amount and number of loans declined. Yet the losses increased. The cooperative era changed the attitude of borrowers towards loans, both in the cooperative sector and the private sector, which was expecting to be cooperatized. The changes made in the marketing structure in the Cap Bon area and the threat of the extension of the cooperativesystem to that area produced a radical change in the behavior of the members of unions and their management, according to a report of the National Audit Commission's Secretary General in 1970. 12/ Whereas loans had been granted in a logical and sound manner until 1966, a radical change took place afterwards from 1967 onward.

In March 1969, following the decision to extend the cooperative system in the Governorates of Nabeul, Sousse, Kairouan, Sfax and Gafsa, the local mutual credit unions were instructed to grant seasonal loans to the newly created cooperatives in this area. On November 1970, the amount of unpaid loans by these cooperatives after dissolution was TD 1,054,000. After September 1969, the local unions at the request of the Government, increased their activities in the private sector. However, the attitudes of the boards of directors apparantly had been fixed from the cooperative era.

2. Administrative Costs

Administrative costs of the credit union system are very light. Each union has about 2 employees, one of whom is the manager paid by BNT; the other, a clerk, is paid by the union. BNT is required by its protocol not to charge the unions for its services, although a nominal fee is paid for the accounting. Other administrative expenses of the union include rent, utilities, and small office equipment. The total administrative expenses are considered by BNT small in proportion to the business done. Financial records available in the Government and BNT indicate that income from interest on loans, discounts, deposits, and other sources about equal expenses in most cases. The system is geared to a low cost operation required with the low rates of interest on loans. Without BNT's assistance in payment of the managers' salaries and the central accounting services (for which the unions pay a small fee) the system could not function.

3. Benificiary Savings and External Financing

The deposits of members constitute the principal resource for loans, as discussed earlier. Assets, including deposits, rose rapidly until 1969 (see Table 8). The decline in 1970 of 25% of deposits was caused by the transfer of deposits of defunct cooperatives whose assets were being amortized for debt payments. Deposits increased to a new level in 1971, reaching TD 4,464,175. The increase indicates that the savings side of the system is doing better than the lending. Included in the credit unions assets were: 15 percent of the shares in BNT ownership, amounting to TD 379,000; and TD 5,200 in the participation in the capital of the National Union of Cooperation.[13]

Other resources have been added to the system through discount of loans and overdrafts with BNT. A comparison between the years 1969 and 1970 follows:

By BNT	1969	1970
Rediscounts	TD 1,086,999	326,058
Overdrafts	TD 825,466	378,058

It is evident from the above figures that the Central Bank and BNT started exercising more rigid controls on credit unions on discounts and overdrafts after the cooperative era.

The only foreign funds which have gone into the credit union system were through a transfer of TD 500,000 of U.S.-owned local currency in 1968 for BNT's use with the credit unions which was repayable to BNT (this money probably went to the cooperatives).

4. Institutional Solvency

Up to 1967, the consolidated results of local unions showed a profit:

+ TD 6,921 when BNT took charge in 1965
+ TD23,099 in 1966
+ TD48,665 in 1967

Deficits appeared in 1968 and have continued annually:

- TD 9,840 in 1968
- TD46,983 in 1969
- TD88,513 in 1970

The above figures represent losses that have been written off. Following are the annual amounts which have been in litigation:

1966 - TD 13,175
1967 - TD 32,699
1968 - TD 80,379
1969 - TD194,418
1970 - TD337,330

In 1970, the 45 credit unions showed the following record: 12 showed a profit; 4 broke even; and 29 showed deficits. In 1972, 15 showed a profit, and an additional 6 showed minor losses. There appeared to be some improvement here. The decline in loans in 1971 (Table 6) reflects the implementation of BNT policy to deny new loans to borrowers with outstanding accounts, and other measures to accelerate repayments.

H. Complimentary Factors

1. Technology

Unfortunately, agricultural lending in the local, mutual credit system, has not been tied to any extension of new technology of farming in any systematic way. There are exceptions, but these are few. In some areas, local extension personnel have been involved in an advisory capacity in the lending operation. This was usually limited to the assistant extension agent. There has been a lack of introduction of improved farming technology in lending programs of the credit unions as well as lending programs of BNT. BNT's role in developing the unions has been on the loan management side rather than on seeking to improve farming technique through the use of credit.

The Government is discussing the possibilities of initiating a form of a supervised credit program to try to fill the technology gap. The primary goal would be to introduce new farming technology through the extension service working closely with the credit unions and BNT. The program will probably be initiated with the new cereals technology of improved Mexican wheat and other improved varieties which have increased yields where they have been used. Other sub-sectors which have access to new technology would follow, such as livestock, forage production, and irrigated vegetable fruit production, and fisheries.

2. Supplies and Sales

a. Program Supplies

The local credit unions are not involved in any way with distribution of supplies; nor is the BNT. However, their credit went for the purchase of supplies. As far as we can determine, subsidies of prices of fertilizer (and seeds) have not influenced consumption. There is a subsidy on the prices of fertilizer as mentioned in Part I. For ammonium nitrate it was TD 15 per ton in 1971, which reduced the cost to farmers to TD 30 per ton. The Government also subsidizes losses incurred by export industries. The wine industry is the principal beneficiary in the agricultural sector.

Fertilizer consumption has been increasing since 1968 for other reasons. This is believed to have been caused by the introduction of improved wheat varieties and new technology which they require. The consumption of ammonium nitrates increased from 15,990 m.t.s. in 1968 to 48,990 m.t.s. in 1971. Consumption of all fertilizer rose from 56,141 m.t.s. in 1968 to 93,586 m.t.s. in 1971. Fertilizer imports are handled by a semi-state fertilizer society. This society distributes fertilizer through its outlets and through supply cooperatives, and other dealers. All fertilizers except the phosphate compounds are imported.[14]

b. Other Factors

The cereals sector and olive sector are well organized and have adequate infrastructure to serve national needs, with some exceptions. There are some needs for improvements in cereals seed handling and storage, and in some olive oil presses and storage facilities.

While adequate feeder roads exist in Tunisia, there are inadequacies and inefficiencies in the marketing structure and transport system which serve producers of fruits and vegetables. There are a few completely integrated large systems which are equipped for processing, packaging, transport, and exporting fruits and vegetables. These are found in some of the large state farms (agrocombinats) and cooperative production units. There is no similar infrastructure for serving the mass of farmers. There is no well organized and equipped national infrastructure for export marketing of fruits and vegetables, such as exists for olive oil and cereals. The export infrastructure of both these crops was left by the French. Private supply cooperatives are struggling to develop to perform vital roles in domestic marketing, but they need technical and financial help in developing adequate organizations and facilities.

As mentioned elseqhere, the prices of cereals and olives to farmers is controlled by the Government. There is no price control on fruits and vegetables. Farmers in all sectors can obtain crop insurance against losses from hail and fire. Insurance is handled by mutual crop insurance societies.

The success of BNT credit in contrast to the financial difficulties of local credit units is due to several factors, but there are two outstanding reasons. One is the economy of scale and high marginal utility of capital on production units receiving BNT loans. And the other is the sound lending policies of BNT with loan repayment guaranteed by its rigid collateral requirements. Much of the losses of the credit unions come from dry-land cereals farming. Farms up to 20 hectares in dry-land cereal production are in the subsistence sector and use traditional methods of farming. There may be possibilities of moving some of the larger of these small farms out of traditional subsistence farming to commercial farming with new technology. This might apply to farms above 10 hectares.

Dry-land cereal farms under about 10 hectares appear to be out of the range of the possibility of becoming independent, viable economic units for commercial farming. Weather is a big factor in risks in all dry-land agricultural production in Tunisia. This includes cereals, livestock, olives, and some fruits. The records of rainfall in Tunisia during the past half-century reveal a pattern of about a five-year cycle: 2 good years; 2 fair years; and 1 failure.[15]

The only areas with security against drought are the irrigated sectors. This sector has been estimated at 100,000 hectares of land under irrigation now, and about 250,000 hectares of total potential capacity. The irrigated land is devoted to citrus fruits, vegetables, forage crops and some wheat and olives. The record of lending of the local credit unions in the Cape Bon area among farmers operating small irrigated fruits and vegetable farms shows the most consistent success. Small farms are from 0.5 to 5.0 hectares in size. Their annual gross income per hectare is estimated at TD 200 to TD 400 per year, steadily. In contrast, a cereals farm of less than 20 hectares would gross between TD 12 to TD 20 per hectare using traditional methods if all products were commercialized, which is not the case.[16]

III. EVALUATION

A. Performance

1. Apparent Use Of All Credit And Effects

Since this discussion deals with credit provided by local credit unions, evaluation must be limited primarily to short-term credit. However, in order not to give a skewed impression, it is necessary to include a statement on the effects of the overall credit program.

From 1962 to September 1969, 90 % of all credit (short, medium and long-term) went to the state controlled cooperative production units of the north and the poly-cultural cooperatives of the center and south of Tunisia. The effect measured in terms of production was negative: growth in the agricultural sector was - 1.8 % for the decade 1962 - 1971. The deterioration of private incentive by the collective schemes, and inefficient management of cooperatives were the principal reasons for the negative effect; although other factors contributed: inexperience of Tunisians in running their country; lack of trained man power; droughts (1964 and 1968) and floods (1969) and a number of policy constraints.

Despite the negative aspects, credit certainly had some positive effects. Some of the positive effects of investment credit did not show up until 1970 and 1971. Tree crops area was increased from 31.7 % of cultivated land to about 40 % during the past decade. New groves and replanted old groves of olives planted in the early 1960's began maturing and were in production by 1971. There was a record crop of olives in 1971. The increased production was the result of both additional area and good rains in 1970 and 1971. The area planted to olives had been increased from 787,000 hectares in 1961 to 1,059,000 hectares in 1971, an increase of 272,000 hectares. Also, 59,000 hectares of old groves had been replaced. The results of increased planting of apricots and almonds in the middle 1960's also showed up in record production in 1970 and 1971.

Investment in water wells and pumps in the Cap Bon area increased production of citrus after 1965, but the production leveled off after 1968 because of the lowering of the ground water table. Pumping by camel traction, once a universal practice in the area among small farmers, practically disappeared by 1972. [17]

Livestock production, most of which had escaped the cooperative movement, showed a positive growth of 2.3 % per year from 1962-1971. Threat of being cooperatized in 1969, caused owners to disinvest in herds, which accounts for the sustained production of meat that year. This threat together with losses in 1969 floods caused meat production to decline in 1970 and 1971. Herds, which were replenished during these years should result in increasing production in 1972.

In the cereals sector, which comprises about 45 % of arable agricultural lands, there was a decline in production after the exodus of the French in 1964. The average rate of decline was -2.96 % per year during the period 1965-1971. Nevertheless, the medium and large farms had been mechanized during the decade. U.S. and other development loans had provided the foreign currency for the importation of farming equipment. Local currency for purchases in Tunisia had been made available through the credit system as described herein. Production of cereals had decreased by -11.12 % annually during the period 1965-1969. Production increased +14.99 % per year after 1969 (1969-1971). While good weather during the latter two years was a key factor, an improvement in private incentive is believed to have been improtant. This is indicated by the rapid increase in credit to the private sector after 1969. Fertilizer consumption, purchased with short-term credit from the various credit systems described herein, quadrupled between 1968-1971, as already mentioned.

The increase in wheat production in 1970 and 1971, while influenced by weather, was also influenced by the introduction of new light-yielding varieties of wheat originating from the dwarf, Mexican varieties. These varieties had spread to only 60,000 hectares of land by 1971 (out of approximately 1,000,000 ha. in cereals), but the improved technology has affected farming on a greater area. Many farmers who have not adopted the new varieties have started using fertilizer and the new techniques on other cereal varieties.

The food processing industries are among the beneficiaries of credit extended by BNT and STB. They depend on short-term credit from these banks to process annual harvests of fruits, vegetables, and olives. BNT also finances the cost of harvesting through short-term credit to medium and large producers.

Credit finances a small part of labor costs in production, harvesting, and processing. Tunisia's population is estimated at 60 % rural, which means that 3.3 million of the 5.5 million live and work in the rural area. As farming is a seasonal business, there is not continuous employment. The labor-intensive crops are fruits, vegetables, and olives, which consequently are important for employment. However, at present, cereal production employs a greater number of people, as is indicated by the number of farms. The harvesting of the olive crop of 1971 provided employment to 70,000 workers for 120 days.

Available short-term credit for labor for these crops comes from BNT and the credit unions. This is provided to a small percentage of producers. Most labor is auto-financed on small farms. There are some tree crops from which small farmers can obtain cash advances through advanced sales of crops. Small producers often make advance sales of olives on the tree

at a loss of as much as 50 %.[18] This loss is in effect a high interest rate. There is also a practice, not yet widespread, of contract production of vegetables for the European markets. Cash advances are made against the contracts.

2. Effects Of Credit From The Credit Unions - Other Credit Experience With Small Farmers

It is impossible to disassociate effects of credit granted by the local credit unions from the effects of overall credit. Until 1967 the benefits of credit from local unions went to small farmers, mostly in the Cap Bon region. Since the unions had been confined to the Cap Bon area until that time, and the system was solvent, one has to conclude that it worked. This area of irrigated agriculture has higher incomes per hectare, and more experienced farm managers than are found among small producers in the cereals and olive areas. The marginal utility of capital of irrigated farming on the smallest of farms in producing vegetables or forage crops is higher than it is on a small cereal farm using traditional methods. It was in the cereal production area that the credit unions expanded after 1967, and began to lose solvency.

Credit unions had suffered because of economic factors, but the system had also suffered by the same effects of the political policies after 1967 as had the rest of the economy. Credit unions' resources by Government Decree were directed into cooperatives in 1969. Nevertheless, the system continued to show financial losses in 1970 and 1971, after the Government had changed its policy toward cooperatives. This indicated that either poor management or lending to unviable systems of farming were responsible. Both elements have been present.

Lending to cereal farmers who operate less than 20 hectares (1/2 the size of the 40 hectares minimum for BNT) has not proven feasible yet. An experiment by the Government in 1963 with a seed loan (from the FSA account in BNT) to farms of this size failed. An experiment with the cereals project (high-yielding varieties) to small farmers on 30,000 hectares in 1971 was also unsuccessful. The Office of Cereals provided credit-in-kind of fertilizer and seeds of high-yielding varieties of wheat. The rate of repayment was about 29 %.

As mentioned elsewhere, the savings aspect of the credit union system has had better results than has lending. The mobilization of capital through savings in the credit union system has provided most of the funds for lending. The increase in interest rates for time deposits in 1971 had a very favorable effect on savings, not only in the credit union system, but in all banking in Tunisia. Thus, there is a source of mobilization of capital which can serve small farmers if the system can become viable.

B. Problems

1. General Policy Problems And Those Related Directly To Credit Union

Deteriaration of private incentive until September 1969 because of collectivization of farms and resources was undoubtedly one of the major reasons for the lack of growth in the agricultural sector. This was evident in:the low movement of investment credit to the private agricultural sector, the disinvestment in livestock herds, forced obsolescense of water pumps and other equipment, and decreased farmers' activities in farm improvement. The state pushed 90 % of the FOSDA fund and short-term credit into the cooperative sector. Although, the FSA fund was available for private farmers' use, its rate of use was low.

Following the change of policy in September 1969, the Government shifted its policy to the "coexistence" of the publice, private, and cooperative sectors. This has cleared the air for private incentive to a great degree. However, there are policy areas where the Government has not taken adequate action which still retards the progress of credit.

One principal problem is in the agricultural extension system. The basic weakness here is the lack of adequately trained personnel to effectively reach largenumbers of farmers to dissiminate new technology. A typical ratio is one highschool trained assistant agent to deal with 1,500 farmers; usually this is an agent who lacks mobility and means to demonstrate.

Another policy constraint is the slow rate of distribution of State land to farmers; the Government still holds approximately 725,000 hectares of the most productive land in the country. The land is in state pilot farms, cooperative production units and experimental farms. The announced policy is to distribute most of this land to private farmers; but the legalistic, policital, organizational, and physical problems are numberous which slow the program down.

There is a need to speed up cadastral surveys and land registrations. Until farmers are convinced that they own their land, they will have less incentive to invest in land improvement and other capital inputs. Also title to the land is necessary for agricultural credit, especially medium and long-term credit. Until better lending criteria can be developed which will be acceptable to commercial banks, the banks will continue to insist on land titles as collateral.

Import procedures and liscensing of importers to import for agricultural spare parts and equipment pose a serious bottleneck to investment and to farm operations. There was some liberalizing in this area in early 1972, but it is still a problem area. The Investment Code, while also liberalized in 1972 still does not offer adequate incentive to foreign investors who might otherwise invest and bring improvements to farm processing and distribution industries in Tunisia.

Taxes on agriculture are a disincentive in some areas to produce. For example, there is an annual tax to farmers on livestock (varies by weight), which discourages production, or incourages evasion. A similar tax also exists on wheat production.

The market infrastructure, while well organized for the cereals sector, is inadequate to serve small farmers in other areas. Also, the infrastructure is not adequately developed in terms of processing facilities and organization to efficiently market quality products in Europe. There are a few exception of integrated systems on state and cooperative farms.

Price adjustments are overdue in cereals. The last increase was in 1967. The terms of trade have shifted away from cereal farmers with the rise in inflation of about 20 % since 1967. This has increased their real cost of capital farming equipment and fuel oil by about 12 %, and consequently has increased the cost of credit for these items by about this much when borrowing to purchase these materials. This analysis does not include fertilizers whose prices are subsidized. It would not include credit for production of items whose price is not controlled.

2. Financial and Fiscal Policies

The centralization of agricultural credit is a constraint to the timely and convenient flow of agricultural credit. This is true of the Government's FOSDA fund administered by BNT. Loan applications must flow up through BNT to the Ministry of Agriculture for approval. This may take weeks. It is also true with BNT's administration of the FSA account. Although BNT has 14 branches, the central office is involved in investigating applications and approving. The central controls of the Central Bank also pose some constraints on lending. The requirement of the Central Bank's approval of loan applications of TD 50,000 on non-rediscountable loans and TD 5,000 on discountable loans also is a deterrant for investment loans. This type of loan requiring Central Bank approval would normally fall outside agricultural lending, but it could effect an important agricultural industry. The principal deterrant is time and convenience. There is need for greater decentralization to speed up lending. This will require better trained management in branch offices of BNT and in credit unions, and loan appraisals by trained agriculturalists in the extension service.

One can also question the action of the Central Bank in increasing BNT solvency ratio. The effect of this decision in principal would take money out of agriculture, since BNT is an agricultural bank. In practice, BNT is also a commercial bank, and much of its agricultural funds are going into other lending, such as commerce, or are being drained off by the Central Bank to finance Government operations. The fact that BNT's reserves increased in face of unsatisfied agricultural credit demand indicates there is something wrong with the system. The factors which appear to be wrong

from the credit side are lending criteria and the structure of interest rates. There are also economic considerations on the production side which are discussed elswhere.

The local credit unions have presented problems at the other extremity of the pole of decentralization. They provide the ideal in decentralization in terms of contract with local people and farmers. Other problems arise, such as local political influence on boards of directors, lacks of trained management staff, and lack of availability of technical agriculturists to make professional judgements on loan applications. Nevertheless, some form of decentralization is necessary in order to make credit easily convenient and timely available to farmers. This will also require more trained people in the unions and close work with the extension organization on loan applications.

The criteria for lending offers a major constraint to agricultural lending, in both short and medium-term loans. Criteria based on land title is not at all suitable to the existing conditions of the rural economy.. There is need to develop criteria on the basis of economic feasibility and the credit worthiness of the individual as determined by technically trained people.

Interest rates are too low to maintain viable financial institutions. They are considerably below what is considered to be the real cost of money domestically and on the international market in Tunisia. They need to be brought in line with time deposit rates. The increase in interest on time deposits in 1971 has caused deposits to rise.While incomes also rose, so did inflation; therefore, the increase in interest rates is believed to be the cause of increased deposits. But the margin between these rates and the interest on credit are too low to warrant risks in agricultural lending.

There was no comparable increase in interest rates on loans. The entire interest rate structure should be adjusted to finance costs of credit institutions. This might seem contradictory to the statement about real interest rates being high for the purchase by farmer of industrial farming equipment because of local inflation and the control on prices of cereals and olives. The two statements are in accord. The implication may be that Tunisia which has to depend on imports of industrial farming and transport equipment is not competitive with Europe and the U.S. in extensive type agriculture such as cereals production which requires heavy capital inputs. The other implication is that the price of cereals is too low and needs to be increased.

C. Recapitulation Of Credit To Small Farms

The Ministry of Agriculture defines small farmers as follows:

Crop	Culture	Maximun Sizes Of Small Farms In Hectares
Cereals	dry-land	60*
Citrus	irrigated	4
Viticulture	irrigated	12
Fruit tree crops	dry-land	250 trees
Olives	dry-land	250 trees
Vegetables	irrigated	5
Forage	irrigated	5

*/ BNT uses a limit of 40 hectares as the maximum size of a small farm

The guidelines for BNT lending (see Table 2) are much more comprehensive than the above listing.

It is estimated that short-term agricultural credit has been provided to a maximum of no more than about 20,000 to 25,000 of small farm operators in any one year by the credit unions, BNT and other sources since 1962. Credit unions provided up to 19,000 farmers in a peak year. The number has varied greatly each year according to Government policies and credit programs of the Office of Cereals and other agencies. The number of credit union loans to farmers varied from a low of 7,759 in 1965 to a maximum of 19,129 in 1967; in 1969 the number was 10,951 and 1970 it was 17,234 (see Table 6). In 1971, the number of loans dropped to 8,536 reflecting the tightening of control by BNT on lending policy of the credit unions. BNT in 1971 granted approximately 5,000 short, medium and long-term loans, all for medium and large farms of private farmers and cooperatives. In other years the number of loans of BNT has been less.

It has been estimated that 60 % of Tunisia's population of 5.5 million people live and work in rural areas. In this category, the Ministry of Agriculture estimates that there are 317,000 farm families who operate small farms of less than 60 hectares out of a total of 325,000 farmers. Most of these small farm operators produce cereals using traditional methods. That is, they represent about 91 percent of the farmers operating 2,977,000 hectares of the total of 4,517,000 hectares of arable farm land, or about 64 percent (see Table 7). It is important to the country much of this land as possible be made more productive. This will take credit and modern inputs. The Government of Tunisia has recognized the need to make credit available to small farmers in order

to get this sector of agriculture moving. So far every attempt to provide farmers with credit in cash, or in kind has been either a complete failure or has had only limited success in terms of repayment. There has been no improvement yet, in the traditional sector of farming as a result of these efforts. There is general recognition that no credit system can be viable until technology is successfully introduced to improve yields. Various approaches are being tried to achieve this. In each of the approaches some form of a credit program is being planned or tried.

It may not be feasible to improve farming on all small farms. Subsistence, dry-land cereals farmers, operating less than about 10 hectares are locked into the system. This comprises about 200,000 farmers cultivating about 800,000 hectares. They cannot engage in extensive farming because of the economic size of their units. Conversely, resources which they use limit the size of farm which they can physically operate. The marginal utility of capital in their situation is 1 or less if crops fail. They are farmers who operate for their subsistence on a slim margin of survival and do not dare to risk changes which might prejudice this margin. Farms in this category may have to be written off for improvement possibilities in their current economic form. Not being economically viable units, they are not likely to change from the subsistence level.[19]

Their economic future may lie in their being leased or rented to larger operators who can consolidate the holdings into economically viable units. The implication is the abandoning of farming by a large portion of the some 200,000 farmers each operating less than 10 hectares of upland farms. Some of these people could remain in the rural area as rural laborers, but a large portion of them would have to emigrate from the area to Europe, to the irrigated sector in Tunisia as it expands, to jobs in industry and services, and to the urban area to join the ranks of unemployed or semi-employed. This trend is in fact taking place now.

D. Ways To Improve Credit

Improvement of the agricultural sector requires greater liberalization of Government policies to give more freedom and incentive to the private sector. Higher interest rates for agricultural loans can help make financial institutions for agriculture more viable. This cannot be feasible until farming technology is improved and prices of controlled products, such as cereals, are increased. Liberalizing the investment code, for example, would permit foreign capital and management skills to flow into Tunisia and improve the market and marketing infrastructure for domestic trade and export, a necessity for improving agriculture in the private sector. These are some of the measures which could increase

effective credit demand. However, with current credit demand not being fully met, further increase in credit demand will be useless unless there are well managed credit institutions backed by sound national financial and fiscal policies to adequately serve credit demand.

Mangement must be trained and lending put in the hands of trained management and agricultural technicians. The technical staff of the agricultural extension service must be trained to work with lending institutions, such as credit unions. Because of the large number of small farmers, a type of mutual credit union system is necessary. However, there is need for greater collective liability among members of a community in sharing losses of loans. The extension service needs to be expanded in staff and reorganized to effectively reach farmers with new technology. While there is an extension service in Tunisia, it exists among various agencies and commodity offices and there is no nationally organized agricultural extension system. One is needed in order to focus on farm problems and find ways to effectively reach small farms.

Despite the financial losses of the mutual credit union system that exists today, it has demonstrated a number of advantages, which justify improving the system rather than abolishing it, as has been suggested in some banking circles. First of all, the density of the distribution of local credit unions has permitted a contact with isolated farmers who are inaccessible to commercial banks and ineligible for credit from them. While the traditional sector has not benefited to any great extent from this system yet, the system now has available a collection and service organization that did not exist previously. The system has tapped a sector whose tradition is to hoard by providing a channel for savings which is tending to penetrate the tradition. The system offers a potential in the future of accelerating capital formation if the deposits are not lost on poor loans. Nevertheless, this or any other credit system, has its limitation on reaching very small farms. Economy of scale would exclude certain sizes of farms as being unviable economic units for improved agriculture requiring modern inputs purchasable with credit.[20]

The accelerated cereals, or Mexican Wheat Program, appears to offer a possible solution for reaching small cereals farms with this new technology in the north and central part of Tunisia where there is adequate annual rainfall to sustain production each year. This technology does not apply to barley and cereal production in the dry south, which is marginal and feasible only about 2 out of 5 years when there is adequate rainfall.

There is also potential for improving technology of small farming in fruits, vegetables, and forage crops with expansion of irrigation. Problems in these areas include the slow rate of development of irrigation distribution

systems and the lack of adequate extension systems to effectively reach large numbers of small farmers. Most of the farmers being introduced to irrigation farming come out of the hills where they have practiced subsistence agriculture. The Government, while faced with many obstacles, at least has recognized the potential and the needs, as well as the problem of trying to accelerate development and expand and improve its extension system.

IV. ROLE OF TECHNICAL ASSISTANCE

There is no ready panacea for making credit work. Experience has demonstrated credit is not important when adequate technology is not available to increase productivity and raise the marginal utility of capital. Credit is important when such technology is available and other constraints to agricultural growth have been removed. 21/

Credit should not be singled out by any donor for special and separate assistance unless all other important economic and other factors, essential for the success of credit, are receiving appropriate attention. Feasibility studies for determining sectoral needs should also include credit, but not to the exclusion of other factors. Ideally, integrated sector programs should be planned for foreign assistance in which credit and other economic constraints can be addressed together. This is usually not feasible. In any case, there is a need to take on integrated approach to technical assistance by closer coordination of donors and of calling their individual and collective attention to all the requirements for development. If this is done properly, a division of labor can be maintained in integrated sector programs.

Once other constraints are addressed and credit remains a key problem, consideration should be given to financial and fiscal policies of the Government, financial needs, and institutional requirements for training to meet credit program needs.

Fiscal policies, such as interest rates and loan criteria warrant equal stress in technical assistance programs to training and institutional building for credit.

William F. Johnson:eb
USAID/Tunis
December 9, 1972

FOOTNOTES

1/ Experts from the International Bank For Reconstruction And Development and Gilbert T. Brown; (see Brown's memo reference number 16 bibliography).

2/ Information on BNT, STB, etc., was obtained from interviews and references in bibliographies; see also references numbers 4 and 13 of bibliography.

3/ Remarks by Mr. Farhat, V.P. of BNT at ACOSCA Conference; (see bibliography number 12).

4/ Johnson, reference 4, bibliography; and report of National Credit Commission, reference 1, bibliography.

5/ See report of National Credit Commission, reference 2, bibliography.

6/ Op. cit. Farhat, reference 12 of bibliography.

7/ Ibid.

8/ Raouf Pacha, see reference number 3 in bibliography.

9/ Ibid.

10/ Reynold P. Dahl, see reference number 15, bibliography.

11/ Al-Zand, see reference number 19, bibliography.

12/ Op. cit. Pacha; see reference number 3 in bibliography.

13/ Op. cit. Farhat, reference number 12, bibliography.

14/ Op. cit. Johnson, reference 4 of bibliography.

15/ Op. cit Dahl, reference number 15 bibliography.

16/ Op. cit Pacha.

17/ Johnson, reference 6, bibliography.

18/ Op. cit. Al-Zand.

19/ Development Digest, see reference 14, bibliography.

20/ Russell B. Gregg, reference 5, bibliography.

21/ Op. cit. Development Digest .

BIBLIOGRAPHY

1. Travaux De La Commission Du Crédit Agricole A Court Terme Présidée Par Monsieur Le Secrétaire D'Etat A L'Agriculture, Ministère De L'Agriculture, République Tunisienne

   An unpublished internal report on the work on short-term agricultural credit of the Agricultural Credit Commission, dated March 1972.

2. Travaux De La Commission Du Crédit Agricole A Moyen Et Long Terme Présidée Par Le Secrétaire D'Etat A L'Agriculture, Ministère De L'Agriculture, République Tunisienne.

   An unpublished, internal report on the work on medium and long-term agricultural credit of the Agricultural Credit Commission, dated March 1972.

3. Les Caisses Locales, par Raouf Pacha, Ministère de L'Agriculture; a report on the Local Credit Unions in Tunisia, dated 1972.

4. Agricultural Sector Paper, Annex To Agricultural Development Loan Paper - Fiscal Year 1972, by William F. Johnson, Agricultural Economist, U.S. A.I.D., Tunis, Tunisia, dated Feb. 18, 1972

5. Agricultural Credit In Tunisia, by Russell B. Gregg, Agricultural Credit Advisor, Farmer's Home Administration, U.S. Department of Agriculture; a report prepared for the U.S. Agency for International Development Mission, Tunis, Tunisia, dated 3, 27, 68.

6. Estimates of Agricultural Credit Requirements - Tunisia, 1966-1972, by William F. Johnson, Agricultural Economic Advisor, U.S. A.I.D. Tunis, Tunisia, December 1966.

7. Annual Report, Banque Nationale De Tunisie, 1970 .

8. Agricultural Sector Study For LAS by Montague Yudelman; A report prepared for U.S.A.I.D. Tunis, Tunisia, dated January 1965.

9. Follow-Up Report On Tunisian Agriculture, by Montague Yudelman; a report prepared for U.S.A.I.D., Tunis, Tunisia, December 1965.

10. Airgram from USAID/Tunis to AID/W, TOAID-A 247, Report on Annual Meeting ACOSCA Board and 10th African Conference on Mobilization of Local Savings, Tunis, September 10-16, 1972.

11. Allocution De Monsieur Le Ministre Des Finances Au 3éme Congrès de L'ACECA Et A La X Conférence Sur Mobilisation De L'Epargne Nationale; address by the Minister of Finance, Mr. Mohamed Fitouri, at the 3rd. Congress of the African Association of Savings and Credit Cooperatives and the 10th Conference on Mobilization of Savings, held in Tunis, Tunisia, September 10/15, 1972.

12. Allocution De M. Tahar Farhat, Vice-President, Sur L'Epargne Rurale Et Les Caisses Locales Du Crédit Mutuelle En Tunisie, Tunis, Tunisia, September 10-15, 1972; Banque Nationale Tunisienne, au 3eme Congrès de L'ACECA Et A La X Conférence Sur Mobilisation De L'Epargne Nationale; Discussion by Mr. Farhat on Rural Savings and the Mutual Local Credit Unions in Tunisia at subject Conference.

13. Allocution De Monsieur Ali Daldoul, Directeur De L'Exploitation, Société Tunisienne de Banque sur L'Epargne en Tunisie Et Les Contributions de S.T.B., au 3éme Congrès de L'ACECA Et A La X Conférence sur la Mobilisation De L'Epargne Nationale, Tunis, Tunisia September 10-15, 1972; discussion by Mr. Ali Daldoul on savings in Tunisia and the contribution of S.T.B.

14. "Agricultural Credit In Southeast Asia", William F. Johnson rapporteur, Development Digest, Vol. IX. No. 2, 1971 pp 55-60; a report on a seminar on importance of agricultural credit before and after the "Green Revolution"

15. The Tunisian Cereals Sector: An Examination of Production, Prices, and Some Alternatives for the Future, by Reynold P. Dahl, Report No. 5, January 1970, Bureau of Plan and Agricultural Development, Ministry of Agriculture, Republic of Tunisia.

16. Thoughts On Tunisian Economic Policy, Memorandum by Gilbert T. Brown to Mr. Sumner Gerard, Director USAID/Tunis, dated June 30, 1971.

17. Development Credit Agreement (Cooperative Farm Project) between Republic of Tunisia and International Development Association, credit No. 99 TUN, dated February 21, 1967.

18. Agricultural Sector Loan - Current Agricultural Credit and Other Financial Data, Memorandum dated February 2, 1972, from Morley H. Gren, Controller to William F. Johnson, USAID/Tunis.

19. Olive Oil Price Policy In Tunisia, by Osama Al-Zand, BPDA Report No. 4, May 1970, Ministère de L'Agriculture, République Tunisienne.

20. Annual Report 1971, Société Tunisienne De Banque.

21. Follow-Up Review Of Special Agricultural Revolving Fund (FSA) with Banque Nationale de Tunisie (BNT) Pro/Ag 664-46-140-014 A), Report No. 4 dated May 8, 1972, by A. Hulliung, Deputy Chief Financial Management Section, U.S. A.I.D. Tunis, Tunisia.

COUNTRY STUDY

SMALL FARMER CREDIT IN SUDAN

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by:
Thomas Stickley and Mohammad Hamid Abdallah
Faculty of Agricultural Sciences
American University of Beirut

Beirut
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SMALL FARMER CREDIT IN SUDAN

by

Thomas Stickley[1] and Muhammed Hamid Abdallah[2]

I. Introduction

Economic development in the Sudan depends largely upon agricultural development. More than 80% of the 15 million people living in the Democratic Republic of the Sudan are deriving their living from agriculture. The potential of the arable land is very high and the amount of the Sudan's share of the Nile water, exploited so far, is very low. Rainfed land is also still plentiful. The private sector needs capital to utilize more of the land and water resources to improve the already cultivated areas by introducing modern technology. Money is also required for the seasonal operations of the farm. Among the most important means of acquiring capital for the farm is through the use of credit.

II Existing Systems of Credit for Small Farmers

1. The Shail

The most dominant source of credit is the shail practice. This is a kind of credit disguised in the marketing process. The farmer makes an agreement with the shail merchant according to which the merchant will pay the amount of the value of the product in advance and the farmer will submit a certain amount of his crop to the shail merchant at the end of the season; the agreement is usually done before sowing the crop. The price offered by the shail merchant is usually equivalent to 50percent of the price of the crop at harvest time. The author calculated the rate of interest of the shail merchant.[3] It was found to range between 60 and 200 percent annually. This practice is still continuing even after commercialization of agriculture and institutionalization of farm credit.

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1. Dr. Stickley is Assistant Professor of Agricultural Economics in the Faculty of Agricultural Sciences at the American University of Beirut, Beirut, Lebanon.

2. Mr. Abdallah is employed in the Agricultural Bank of Sudan and currently finishing a Master of Science degree program in Agricultural Economics in the FAS at AUB.

3. Abdallah, Muhammed Hamid. 1973. The Effect of Tangible Security on Farm Credit in the Shendi District, Sudan. M.S. Thesis, AUB, Beirut, Lebanon.

2. The Gezira Scheme

The year 1926 witnessed the greatest step towards commercialization o. agriculture in the Sudan. In that year the Sennar dam was constructed to irrigate the Gezira scheme for cotton cultivation which came to be the backbone of the Sudan economy. In this scheme the tenants are considered to be partners with the government. The costs of production are distributed between the Gezira board and the tenants. Each cost item is known to be the responsibility of either the board or the tenant. The tenants cannot afford the seasonal payments for which they are responsible. So the board is advancing loans to the tenants for each operation they make and this is deducted from their share in the income which was 42% and nowadays is 50% of the total net income. In this respect the Gezira board is acting as both an administrative and a credit institution. Supervision is provided by field inspectors who make regular visits to supervise all the farm operations. So, in this sense, it is considered a completely supervised credit system.

Besides the field inspectors, there is a committee from the farmers that help both in supervision and the administration of the scheme. For a group of inspectors there is a group inspector to whom all the field inspectors report their daily, weekly and monthly assignments. There is a block inspector for the group inspectors. The system is a completely Supervised Credit System except that there is no direct interest rate charge . But, the interest rate of the money used is supposed to be calculated together with the cost of production.

The Gezira board sells all the cotton and its by-products and from the sales it takes all the money advanced to the tenants, then distributes the rest of the tenant's share to each according to his production. If the tenants' production was just covering their advances the board collects its loans fully and there will be no delinquency. But, if the tenants' share could not cover the expenditures which were paid by the scheme there will be some delinquency which fluctuates with the amount of production and the cotton prices in the international market.

The Gezira scheme is minimizing delinquency by collectively charging the tenants. If every tenant is charged alone the scheme may risk losing from the tenants who could not produce enough to cover their advances. On the other hand, such a policy may reduce the individual incentives of the productive farmers who find themselves paying for the losses incurred by the unproductive tenants.

All the participants in the Gezira scheme are alloted some areas in which they are supposed to grow their own crops (other than the cotton). Sorghum, the staple food of the people, is the most important crop grown in the farmers' private plots followed by peanuts. The scheme provides only the water to the te nts who are growing these crops. When they need credit to finance these crops they resort to the shail practice described earlier.

3. The Agrarian Reform Schemes

The success of cotton in the Gezira scheme and its high prices in the world market encouraged the government to issue licenses for the private entrepreneurs interested in cotton. This gave rise to what was known as the private pump schemes on the Blue and White Niles. The general features of these private pump schemes were similar to those of the Gezira scheme. They were financed by the commercial banks and some foreign financial institutions. In turn, the scheme owners pay the farmers in advance for the farm operations for which they are responsible and deduct these expenses from their shares of the income. When the government established the Agricultural Bank of Sudan these schemes were financed by the bank which sells the cotton and its by-product to collect its loans. The interest rate was seven percent for the loans advanced, one percent as a marketing commission and one percent as supervision commission (totalling about nine percent). The farmers in each scheme were not responsible for these charges.

After the year 1964 the cotton yields and prices started to decline and as a result these private pump scheme loans became delinquent in the Agricultural Bank and the rate of delinquency was increasing. In 1968 the bank decided to stop financing all the delinquent schemes which meant that a lot of farmers were left idle and with nothing on which to depend for their living. In fact, the private pump schemes were vital to the farmers who depend on the water to grow cotton, staple food, pasture, and water their livestock. So, the government decided to take over all those schemes (which the bank refused to finance) and run them under an agrarian reform institution. This institution took over all the responsibilities of the private pump scheme owners and the credit system. Supervision to the farmers was running on the same basis described above. Collection of loans advanced depends mainly upon the amount of cotton production and prices.

4. Khashm-el-Girba Scheme

This is mainly a settlement project executed to settle the Sudanese Nubians whose lands were covered by the Aswan High Dam Lake Nasser according to the Nile waters agreement between the Sudan and Egypt. It runs on the same basis as the Gezira scheme. Farmers are growing mainly cotton, peanuts, wheat and sugar cane. The scheme provides credit for the cotton and the farmer has to finance the other crops by his own means. Unlike the Gezira and the agrarian reform schemes, the shail practice is not known among these newly settled farmers. But other sources of credit may exist.

5. The Cooperative Department

Realizing the high charges and profits made by the shail merchants the Cooperative Department decided in 1948 to extend credit to the farmers where this practice is most prevalent. Shendi district was chosen to receive this credit service in order to abolish the shail practice. For individuals the security required was either registered land or buildings. For Cooperative Societies the security required was livestock. Repayment was not enouraging and so the experience failed but the shail practice continued up till now. The reason the shail merchants are able to survive is that, though they do not bother with

tangible security, they know their customers personally and witness the harvest to take their payment, in kind, before the farmer is able to do anything else with the crop.

Nowadays, and after the 25th of May, 1969 revolution, the Cooperative Department is again becoming active in extending loans to the Cooperative Societies. The number of cooperative societies financed by the Cooperative Department during the last five years was 327.

The total number of farmers participating in these cooperatives was 319,796 farmers. The area grown by each farmer varied from ½ to 10 feddans (1 hectare equals 2.47 feddans). The amount of unrepaid loans during the last five years was 26 percent.

6. The Agricultural Bank of Sudan

After independence in 1956 the people of the Sudan started to become more aware of economic development. It is very clear that agriculture gets first priority in the development of the Sudan. Among the many working tools that had been established to achieve the development of agriculture was the Agricultural Bank of Sudan. The major function of this bank is to service credit to all interested farmers especially small and medium-sized farmers. The security required is a tangible asset whose value should be 30 percent more than the amount of the loan. In the case of medium and long-term loans the farmer-borrowers have to contribute 30 percent of the amount of loans they need.

The services of the bank are extended for all crops including cotton. As was mentioned earlier, the bank financed the cotton through the private pump schemes up till 1968 when the Agrarian Reform Department was established to take over those schemes. The security in the cotton scheme is the cotton produced and the fixed assets of the scheme. When the bank sells the produce it withholds the amount of the loans, interest and other service commissions. So, amount of delinquency varies with the amount of production and the cotton prices.

For other crops the security is a tangible mortgage. The most important crop financed by the bank, other than cotton, is sorghum. It was fully financed from sowing to harvest. Due to delinquency the policy was changed and financing was limited to only the harvest stage when the crop is really established and can be estimated more accurately. The bank loans for sacks, the harvesting operation, and storing the crop. Besides the warehouses, the bank has two big modern silos, one in Gadarif (in the eastern part of the Sudan -- which is the highest sorghum production area) and the other in Port Sudan for storing the surplus and making it ready for exportation. When prices are low, due to high yield, the bank enters the market as a buyer to stabilize prices in the form of price supports. In this respect the bank is acting both as a credit and a marketing institution. Most of the sorghum growers getting the Bank's services are the big farmers in the Gadarif, Dali, Mazmum and Migenus areas.

Other crops financed by the bank are peanuts and wheat in the Gezira and Khashm-el-Girba, beans in Shandi, Atbara and Dongoli, fruits and vegetables in Kassala and Sennar, and tobacco in Darfur and Sennar.

In fact, the Agricultural Bank of Sudan is performing well in agricultural development but it is facing the problem of delinquency and farmers are facing the problem of security requirements.

The average number of farmers financed by the ABS was 30,249 per year up till 1968, when the Agrarian Reform Department took over the responsibilities of the private pump schemes. After 1968, the average number of farmers getting ABS loans dropped to 4,600 farmers per year. This figure is low when compared to the total number of farmers (the population of the Sudan is 15 million, 80 percent of whom are living in rural areas). The main reason so few receive ABS loans is the tangible security required.

If the bank could find an alternative way to secure its loans it could increase the number of farmers getting its services.

The bank is also financing agricultural cooperative societies which numbered an average of 631 cooperatives during the last five years. It is interesting to note that the percentage delinquency for the individual farmers (13%) was lower than that of the cooperative societies (45%). This means that the planning and organization of the cooperatives have to be amended before they could be considered as a poor form of security for loans.

III. Possibilities of Altering the Credit System to Solve the Credit Problems of Small Farmers

From the foregoing discussion it is clear that only farmers in the public sector schemes or those who are able and willing to mortgage tangible security can get institutional credit. Even the farmers in the public sector schemes need credit to finance their crops other than cotton. The ABS is extending loans to the Gezira scheme farmers for financing wheat harvests on the condition that the Gezira Board administration will collect the loans from the farmers. Otherwise, the farmers have to resort to the shail practice or go without credit. The problem with shail is the high rate of interest charged. It is giving a credit service which will just keep the farmer continuing in business without any hope of being better off in the future.

The farmers in the Sudan can be grouped into three categories regarding their credit problems.

In the first category are the farmers who are participants in either the Gezira Scheme, Khashm-el-Girba Scheme or the Agrarian Reform Department Schemes. These are getting credit for cotton cultivation only. They need credit to grow other crops. The farmers in the Gezira are getting loans to purchase farm machinery if they formed a cooperative society and the governor of the Gezira Scheme agrees to collect the loans out of their produce. Such service, if extended to the Khashm-el-Girba and the Agrarian Reform Department will solve part of the farmers' credit problems. If there is no need for farm machinery, at the current stage of development, these farmers are definitely in need of short term loans.

The second category of farmers are those who can offer the approved tangible security and borrow from the ABS. The problem facing these farmers is the size of the security they are able to offer as compared to their credit needs. The security offered should be 130% of the amount of loan they need. Sometimes their needs are greater than that which can be secured from the value of assets they have. In such cases, they either have to rely upon the shail merchant to make up the difference between the loan size they needed and what was approved for them by the ABS. Otherwise, they must get by on the loan they were able to get. Borrowing from both the shail merchant and the ABS may cause delinquency resulting from having two lenders at the same time. In such cases the farmer will be delinquent to the ABS because the shail merchant is living with the farmer in the village and will witness the harvest to take his payment before the ABS. Another problem facing the farmers who can borrow from the ABS is the long procedures required before a loan is approved, especially the registration of the mortgage.

The third category is those farmers who are neither participants in the public sector schemes nor can they borrow from the ABS due to the lack of an approved tangible mortgage. The problem facing these farmers is that the majority of them have no other alternative than the shail merchant whose charges are particularly high for this category of farmers. The shail merchant is extending loans to these farmers though their situation is extremely risky. The shail merchant seems to compensate for this high risk by the high rates of interest charged (Table 1).

Table 1. Calculated rates of interest charged by the shail merchant to four groups of farmers in the Shendi district of Sudan.

Respondents	Price offered to the farmer by the shail merchant at the time of the agreement (Sudanese pounds)	Price at harvest for the same crop (Sudanese pounds)	Duration of payments (months)	Rate of interest (percent per year)
Borrowers from ABS				
Non-delinquent	9	10	2	103
Delinquent	7	10	5	100
Non-borrowers from ABS				
Eligible (have a tangible security)	8	10	3	100
Ineligible (do not have tangible security)	5	10	6	200

Source: Abdallah, M.H. The Effect of Tangible Security on Farm Credit in the Shendi District, Sudan. M.S. Thesis. American University of Beirut, Lebanon, 1973.

Though it charges a rate of interest ranging from 67 to 200percent farmers from all the above mentioned groups are using the shail credit either alone or in combination with another source. In the study conducted in the Shendi District of the Sudan farmers who are borrowing from the ABS and those who are not were found to be using shail (Table 2).

The fact that so many farmers resort to the shail merchant reflects a defect in institutional credit that needs to be ammended. In 1948, as mentioned earlier, the cooperative department started extending credit in the Shendi District with the objective of competing with the shail practice. In 1957 the ABS was established to extend credit to raise the productivity of small and medium size farmers and, at the same time, abolish the shail practice. Presently, the shail is still continuing which means that the ABS and all other institutional sources have to put into effect a change in policy that will make credit available to all classes of farmers and no farmer will find it inevitable to resort to the shail practice.

From the above discussion the small farmers' most serious problems in getting credit is in providing the tangible security required by the ABS and the high rates of interest claimed by the shail merchant. The following recommendations may help to solve the small farmers' problem in getting the proper credit service.

A. Intangible Security

The tangible security required by the ABS was found to be neffective in repayment of loans. Around 80percent of the ABS borrowers said that they would not repay their loan sole for the reason that they are mortgaging their land (Table 3).

The alternative to tangible security is the use of the intangible merits of the farmer and the repayment capacity of his project as security for loans. By the intangible qualities is meant such things as the level of education, knowledge in agricultural matters, reputation, honesty, interest in farming, attitude towards borrowing, and the family cooperation. By repayment capacity is meant the economic rate of return expected from the project to be financed. The stronger the intangible qualities of the borrower and the repayment capacity the less is the stress on the tangible mortgage the farmer could offer.

In the study conducted in the Shendi District of Sudan[1] the factors which were found to be associated with repayment of loans were as shown in Table 4.

The use of the intangible qualities of the borrower and his repayment capacity as security for loans will make credit available to the needy farmers without regard to the land tenure status.

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1. Abdallah, H.H. 1973. The Effect of Tangible Security on Farm Credit in the Shendi District, Sudan, M.S. Thesis, A.U.B., Beirut, Lebanon.

Table 2. D. ribution of respondents according to sources of cre it.

Sources of Credit	Respondents									
	Borrowers				Non-borrowers from ABS					
	Delinquent		Non-delinquent		Eligible		Ineligible		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
No credit	-	-	-	-	16	53	2	7	18	(15)
ABS alone	27	90	14	47	-	-	-	-	41	(34)
Shail alone	-	-	-	-	8	27	23	77	31	(26)
Scheme owners alone	-	-	-	-	3	10	3	10	6	(5)
ABS & shail	3	10	16	53	-	-	-	-	19	(16)
Scheme owners	-	-	-	-	3	10	2	7	5	(4)
Total	30	100	30	100	30	100	30	100	120	(100)

Source: Abdallah, Muhammed H. 1975. Effect of tangible security on farm credit in the Shendi District, Sudan, M.S. Thesis, A.U.B., Beirut, Lebanon.

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Table 3. Distribution of the ABS borrowers according to repayment of loans due to fear of foreclosure.

Respondents	Repay due to fear of foreclosure		Repay for reasons other than fear of foreclosure		Total	
	No.	%	No.	%	No.	%
Non-delinquent borrowers	7	23	23	77	30	100
Delinquent borrowers	6	20	24	80	30	100
Total	13	(20)	47	(80)	60	(100)

Source: Abdallah, Muhammed, H. 1973. The effect of tangible security on farm credit in the Shendi District, Sudan, M.S. Thesis, A.U.B., Beirut, Lebanon.

Table 4. Factors affecting repayment of loans.

Factors	Units	Non-delinquent borrowers	Delinquent borrowers
Number of dependents	persons	13	10
Cultivated area	hectare	14.24	8.4
Value of livestock holding	Sudanese pounds	2572	1885
Net return/hectare	Sudanese pounds	282	137
Those who keep seeds from previous seasons	frequency	17	4
Those who wait for better prices	frequency	18	11
Those who care about their reputation	frequency	19	4
Interest in farming	frequency	23	12
Those who like to be supervised by the ABS	frequency	17	8
Those whose families cooperate with them	frequency	17	8

Credit should be integrated with extension education, marketing and supply. Credit without extension education may not be effective in improving the productivity of farmers. Likewise extension education without credit may be meaningless especially if farmers are financially unable to execute the extension agent's advice. When they are linked together each one will be complementary to the other. Marketing of the produce, when in the hands of the credit agent, is a guarantee of repayment of loans. The credit agent can sell the produce of the farmers at the highest prices, deduct the amount of the loans and then pay the farmer his balance. Also, when the farm supplies are in the hands of the credit institution it may be readily available to the farmers at the right time and at reasonable prices.

B. Supervised Credit

A second possibility for making credit available to all farmers without regard to their tenancy situation is a supervised credit program. This will involve planning the farm business and budget and executing the plan. Even the home consumption budget should be taken care of. The selection of the participants should be based upon the intangible qualities that make them better producers and hence able to repay the loans. The Gezira scheme, described earlier in this paper is a good example of a completely supervised credit program. The additional supervision and extension service required for the success of a supervised credit increases the cost of lending. So the interest rate charges have to be increased to cover such costs. Though the cost of borrowing will increase for the farmers it is expected that from the supervision, the extension services and the organization of their marketing and farm supplies, their incomes will increase by more than the added costs incurred.

C. Credit Rating System

In the Philippines farmers are classified into three groups. The first is made up of those who were known to repay their loans regularly. Those farmers could be given the loans they need regardless of the tangible security offered. The second group is made up of those who were either not known before (new customers) or those borrowers who could not repay their loans due to crop failure or any acceptable excuse. This group could be given small loans but have to be closely supervised. The third group is made up of those who did not repay their loans without an acceptable excuse. Those borrowers have to offer a tangible security that should be foreclosed in case they did not repay their loans. Such a system may be adapted in Sudan. The non-delinquent borrowers could be designated as Class A.. Class B could include all new borrowers plus those old ones who are delinquent for an acceptable reason. Class C will include those delinquent borrowers who did not repay their loans without an acceptable excuse.

D. Collective Security

Cooperative societies which are well planned and organized can serve the purpose of lending to small farmers. The loans would be extended to the cooperative societies. The participants are individually and collectively responsible for repayment of the loans. Supervision has to accompany this system of extending credit so as to minimize the possibilities of delinquency. It is true that administering credit through cooperative societies was tried in the Sudan and the experience was not successful enough to encourage the substitution of intangible for tangible security. Nevertheless the role of cooperatives in meeting the needs of small farmers could be expanded if they are planned and organized better. The co-signature of a person with a current bank account or reliable salary may be a sound intangible security that could substitute for tangible security.

E. Incentives

Credit could be used as an incentive to promote productivity and repayment of loans. The farmers who resort to the shail practice and pay as much as 200 percent interest could accept a small loan with a rate of interest higher than that which the institutional lenders are currently charging. This high rate of interest could be reduced every time the borrower repays his loan until it is equivalent to the normal rate of interest. Also loan size could be increased every time the borrower repays his loan until it reaches the normal safe level. This way credit will be used as an incentive to farmers to increase their production and repay their loans.

IV. Conclusion

In the Sudan institutional credit is extended to the farmers who can offer tangible security or who are participants in either the Gezira, Khashm-el-Girba or the Agrarian Reform Department Schemes. The latter group of participants is given credit only to finance the major crop grown by the Scheme. They need credit to finance their other crops. They generally resort to the shail practice if they cannot offer tangible security to get loans from the ADS. This tangible security requirement is depriving those farmers who either cannot offer a mortgage or who are not willing to mortgage their properties.

The solutions recommended are to reduce the tangible security requirement if the intangible qualities of the borrower are strong. To implement this change of policy credit has to be integrated with extension, marketing, and supply. A supervised credit program, a credit rating system and collective securities are also recommended to solve the small farmers credit problems in the Sudan. Incentives to borrowers are recommended to accompany all of these programs.

LITERATURE CITED

Abdallah, M.H. 1973. The Effect of Tangible Security on Farm Credit in the Shendi District, Sudan. M.S. Thesis. A.U.B., Beirut, Lebanon.

Agricultural Bank of Sudan. 1972. Number of farmers getting loans from the Agricultural Bank of Sudan, amounts of loans advanced and repayment records. Unpublished data sent by the Agricultural Bank of Sudan on the request of the authors.

Cooperative Department of Sudan. 1972. Number of cooperatives served by the Cooperative Department of Sudan loans advanced and repayment records in the last five years. Unpublished data sent by the Cooperative Department on the request of the authors.

F.A.O. 1965. Agricultural credit through cooperatives and other institutions. Food and Agricultural Organization of the United Nations. Rome, Italy.

Johnson, V.W., Johnson, E.C. 1966. The Development of Improved Credit Institutions for Farmers. Getting Agriculture Moving. Raymond Borton (Editor). The Agricultural Development Council, Inc. New York, U.S.A.

Philippine Congress and House of Representatives, Republic Act No. 821, August 14, 1952. As Assembled by Republic Act No. 1285, June 15, 1955.

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COUNTRY PROGRAM

THE COOPERATIVE CREDIT SCHEME IN UGANDA

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by:
D. C. Frederickson
Cooperative Credit Specialist
Agricultural Cooperative
Development International
and USAID/Uganda

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SUMMARY

Prior to 1961, there was no organized system whereby Ugandan farmers could receive short, medium or long term credit for the production of cash or food crops. The then Uganda Credit and Savings Bank was able to lend only $360,000.00 to larger progressive farmers during the year ending 30 June 1960.

The Uganda Government, aware that over 80 percent of their foreign exchange came from agricultural produce, invited two agricultural credit specialists to study the agricultural credit position in Uganda and make recommendations for its furtherance.

In 1960, Mr. Chester J. Tyson of the Farmers Home Administration in the United States was invited to visit Uganda to advise on the possibilities of establishing a supervised credit system similar to the Farmers Home Administration in the United States. Mr. Tyson carried out his survey and made recommendations on which the "Progressive Farmers Loan Scheme" was based and launched.

In brief, this was a scheme whereby progressive farmers were selected by officers of the Department of Agriculture, a farm plan was formulated (usually by the District Agricultural Officer) and a loan was made available through the Uganda Credit and Savings Bank (now the Uganda Commercial Bank) to the farmer on a 50 percent guarantee from the local administration. These loans were issued almost entirely in kind by means of purchase orders approved by the District Agricultural Officer. The goods were issued to the farmers and the trader received payment through the Bank upon authorization by the District Agricultural Officer.

Although the scheme appeared to have many features conducive to success, the implementation and/or administration was far from successful and the scheme was suspended in 1964 because of serious defaulting.

Various reasons were given for the collapse of the scheme among which were the following:

1. Farm planning was carried out by largely inexperienced officers who were perhaps overburdened by other departmental and administrative duties.

2. Frequent transfers of staff destroyed continuity.

3. The loan approval procedure was cumbersome which resulted in loans being granted too late in the year to be useful.

4. Local participation in the selection of borrowers was lacking. Nobody with intimate knowledge of the borrowers character, capacity or credit worthiness participated in the loan approval mechanism.

5. Follow-up and supervision of loans by Agricultural staff was halfhearted or nonexistent.

6. The formal marketing channels that were already in existence were partially or totally ignored. This resulted in a lack of loan security.

Shortly after the completion of Mr. Tyson's report, Mr. J.C. Ryan of the Agricultural Credit Department of the Reserve Bank of India visited Uganda with terms of reference similar to those of Mr. Tyson. After some time was spent studying the credit problems of the small farmers and the organization of the Cooperative movement in Uganda, Mr. Ryan produced a report out of which the Cooperative Credit Scheme, as it basically exists today, was born.

Mr. Ryan considered various achievements and failures of Mr. Tyson's scheme and considered the Raiffeison type of credit society unsuitable for Uganda where farmers and societies are scattered, but considered the large network of primary marketing societies that covered nearly every village in the country as the ideal vehicle through which an equitable distribution of small farmer credit could be implemented.

Having selected the already existing cooperative marketing network as the institutional framework around which small farmer credit would be woven, Mr. Ryan suggested basic criteria by which the credit recipients would be selected, maximum liabilities fixed and administrative channels opened.

The final report was approved by the Uganda Government in mid-1961 and the Cooperative Department was instructed to implement the pilot credit scheme following the issuance of a credit scheme manual outlining the basic rules and procedures for implementation. The manual was issued on 25 September 1961 and carried the following basic rules and procedures which are in effect today with only minor variations:

1. To receive credit, a society must have been in existence and operating successfully for not less than three full crop seasons.

2. A society must have no, or virtually no, debtors or creditors, and,

3. The committee and members appeared, in general, to be willing to abide by the byelaws of their society. In other words, they had voluntarily imposed a form of common and self discipline upon themselves and had adhered to that discipline.

A similar set of fairly simple criteria for judging the credit worthiness of the individual farmer was laid down at the same time:

1. To be eligible for a loan, a farmer must have been a member of his society for not less than three years and he must have sold his crops through the society for not less than the previous three crop seasons. This regulation intended to disqualify from borrowing, any member who may not be loyal to his society and be tempted to market his crops elsewhere to avoid loan repayment.

2. A potential borrower must not be encumbered from any other source which insured that his full debt repayment capacity was directed toward loan liquidation.

3. He must be known by the committee of the society to be a hard working, honest, healthy member who could take full advantage of any loan granted to him for productive purposes.

4. He must be able to produce two fellow members, also in good standing with the society, who are prepared to stand as guarantors for the loan.

With this simple criteria of society and borrower selection, experience has proven that when these rules are adhered to and rigidly enforced, there is very little default. On the other hand, where one or a combination of the rules have been altered, ignored or waived, the rate of default rose sharply and the greater number of those defaulting would have been deemed not credit worthy had the original criteria been adhered to.

In late 1961, 100 credit worthy societies were selected to receive loans of which 98 were ultimately to accept the principles set forth and participate.

In the first year of operation, the greatest possible emphasis was laid on complete repayment at any cost. Drought, famine, depredations of game animals, hail, social misfortune and all

other natural disasters were discounted as valid reasons for failure to repay. Some defaulting did occur in the first year, but these defaults by both the societies and members were later collected in their entirety.

The following year, 1962, saw the number of credit societies expand to 241 and eventually reach about 600 at the time of this writing. Administrative procedures to insure an unbroken chain in the flow of money were tested and proved successful.

Credit worthy members were invited to apply for loans from their society. The society then bulked the applications and completed a loan application to the Uganda Credit and Savings Bank for a credit scheme loan. This application was forwarded to the Commissioner for Cooperative Development through the District Cooperative Officer. The Commissioner's credit section processed, indexed, approved and forwarded the application to the headquarters of the Uganda Credit and Savings Bank where final approval was given and the respective branch bank was instructed to release funds to the society as requests by members were endorsed by the District Cooperative Officer.

At the time of repayment, the loans were deducted from members crop deliveries to the society. The society again bulked individual loan repayments to pay the society's loan to the bank. In the event of an individual member's failure to repay the loan, the society's obligation remained and security documents provided for the society's own financial structure to be used for full payment of the bank loan.

It is interesting to note that during the initial stages of the scheme, very little or no emphasis was placed on the dynamic use of credit. Society committees were urged and instructed to make certain the money was "properly used" for agriculture, but the extension staff of the Agriculture Department was not called upon at that time to insure the dynamic use of credit. In other words, the total effort of the personnel concerned with the credit scheme was placed on the pure mechanics of lending and collecting.

According to the byelaws in use by cooperative societies, the rate of interest a member must pay is 12 percent per annum. This rate has never been altered for short-term agricultural production loans. Some exceptions were later made for medium-term loans granted on a project basis.

Funds for the operation of the Cooperative Credit Scheme have come from a variety of sources. Originally, funding was made possible ($285,700.00) by tapping the now defunct African Loans Fund. Since that time, money has come from the cotton and coffee price assistance funds, the Development Loans Fund, the Uganda Cooperative

Development Bank, societies own funds and various grants and overdrafts provided through commercial sources in times of peak loan activity.

The advent of the reorganized Cooperative Development Bank in 1971 and a renewed emphasis on mobilization of rural and urban savings have lent a new dimension to the scheme; however, the original foundation of the Ryan proposals are still in existence and are bearing the test of time.

II. PROGRAM CHARACTERISTICS

A. Background

1. Historical Summary:

The Cooperative Credit Scheme was conceived in 1961 following the study and subsequent acceptance of a report by Mr. J.C. Ryan of the Agricultural Credit Department of the Reserve Bank of India. Initial funding for the scheme was $285,700.00 of which $95,000.00 was actually approved for lending and disbursed. In addition to borrowed funds, the initial intake of 98 societies lent an additional $41,000.00 from their own funds making a total lent of $136,000.00. The Government of Uganda eventually increased the amount of funds available for lending to $1,400,000.00 and the Development Loans Fund was suspended. In 1972, these available Government funds were further increased to $1,857,000.00 from the Coffee Development fund.

Fortunately, political changes in 1966 and 1971 had very little or no affect on funding for the scheme which seems to enjoy support and popularity with both political and military governments.

The entire country, which until late 1972 was composed of 20 administrative districts, is served by the scheme. There has been a steady growth of loan approvals since the scheme's inception. The policy has been to avoid any rapid growth that would tend to overburden either the Agricultural or Cooperative loan supervisory staff.

Future plans call for a steady expansion in the cotton and coffee growing areas while production and development loans for other crops will likely evolve on a project basis.

2. Relation to National Credit System:

Despite the diversity of funds over the life of the scheme, the main contributor has been, and is likely to remain, the Government. At its inception, the scheme used the Uganda Credit and Savings Bank as its agent for the disbursal and collection of loans. In 1965, the Uganda Commercial Bank Act converted the Uganda Credit and Savings Bank into a Government-owned commercial bank which retained the agency for credit scheme funds. The branch banking system expanded to eventually include branches in 16 of the 20 district headquarters.

In 1971, the Uganda Cooperative Development Bank in six branches took over the agency from the Uganda Commercial Bank. Today, these six branches and ten branches of the Uganda Commercial Bank serve as the disbursing agents for the ordinary cooperative credit scheme, disbursing loans on the instruction of the Cooperative Department. In addition to this banking chain, three Cooperative Tobacco Unions control the disbursement and collection of loans for the Smallholders Tobacco Project, a joint effort by the Uganda Government and the I.D.A.

Except for the Uganda Commercial Bank, the commercial banking system in Uganda is largely foreign owned and details concerning the total agricultural loan portfolio of these institutions are extremely difficult if not impossible to obtain. We do know, however, that total advances to agriculture through the Uganda Commercial Bank rose from 2.8 million dollars to 3.66 million dollars during the 1967-1968 financial year. Of that amount, about 73 percent was lent to cooperatives, largely as finance for the cash purchase of farmers' crops.

3. Other Program Activities:

At the present time, the Cooperative Credit Scheme is independent of other rural development schemes unless those schemes contain a credit element. An example of this is the Smallholders Tobacco Project which is intended to double tobacco production over the five year life of the project. The I.D.A. Development Credit Agreement stipulated that the existing credit scheme procedures be used to channel loans to the farmers.

It is quite likely that future agricultural development projects will contain an element of small farmer credit. It can only be assumed that such credit will be channeled through the existing Cooperative Credit Scheme network on a project-by-project basis.

4. Relation to Pre-existing Local Institutions:

Prior to the advent of the Cooperative Credit Scheme in 1961, there were no means by which the African peasant farmer could be afforded agricultural production credit. In Ryan's feasibility report, he recognized this important aspect as an asset in that no serious indebtedness problem was inherent. He stated that money lending was

not totally absent in the country, but it had not developed as a profession but rather as a service between traders and farmers for consumer goods. As near as can be determined, perpetual indebtedness is nonexistent.

In short, commercial banking sources were not interested in extending credit to small farmers. The institutional framework for the scheme was, however, in existence in the form of an active, functioning cooperative movement whose main concern was marketing. Principal officers for the scheme were drawn from already existing cadre and were able to assume credit duties with minimal training. From the inception of the scheme until 1968, an expatriate officer in the Department was in charge of the scheme which undoubtedly benefitted from his experience and prior knowledge of credit institutions in developing countries. It is quite possible that the speed of implementation and subsequent supervision would have been less efficient if it had not been for the presence of this expatriate officer.

5. Agricultural Patterns and Potential:

The program area for Uganda's Cooperative Credit Scheme includes the entire country. Uganda is an East African country with an area of about 93,981 square miles, bisected by the equator, of which 13,689 square miles are covered by water. It is a landlocked country. Most of Uganda lies between 3,000 and 4,000 feet altitude which moderates the tropical climate.

Rainfall varies from less than 20 inches in the northeast area to 50 - 60 inches in the southwest and west. The seasons are not well defined, but there are normally two dry periods per year: one from December to February, the other in June and July.

Uganda has an approximate population of 10 million according to the 1970 census, and its annual rate of increase is estimated at 2.5 percent. While English is the official language, numerous other Ugandan languages are spoken.

Eighty percent of Uganda's economy is dependent on agricultural exports of which four-fifths is provided by Robusta coffee and cotton. Uganda has launched an agricultural diversification program aimed at the reduction of foreign imports and increase of exports.

Examples are in the production of tea, sugar, vegetable oils and cakes, horticultural products and cocoa. It is the sixth largest coffee producer in the world.

Subsistence agricultural crops consist of cooking bananas, cassava, millet, sorghum, sweet potatoes, maize and beans. These crops sustain over 80 percent of the population. Eradication of the tsetse fly in designated areas has created a potential for a large expansion of livestock production.

There are generally considered to be about 14.5 million hectares of land available for small scale agriculture. Sixty percent of this falls within an area where rainfall probability of 30 inches per annum is exceeded 9 years out of 10.

Within the agricultural area, two major ecological zones are distinguishable: The first, typified by the growth of elephant grass, covers the south and west of the country. Typical crops grown in this area include bananas, tea, coffee and sugar. The second zone, marked by short grass cover, includes central and northwest Uganda. In this area, finger millet, sorghum and cassava are the staples while the main cash crop is cotton although maize and groundnuts may also contribute toward the farmers cash income.

Much of the central plateau and the western hills are covered by red soils derived much from the basement complex, although they are widely interspersed with patches of alluvial clay. In the mountain areas, the soils are much younger and less weathered, while in the north and northeast they are generally sandy loam with medium productivity.

Land usage for agriculture varies from over 70 percent in densely populated areas to as little as 9 percent in parts of the northwest. It is estimated that more than half of the cultivated land is devoted entirely to subsistence production and only one-quarter is devoted exclusively to cash crops. There is little or no specialization of crops other than according to ecological patterns. The average size holding is estimated to be 4.45 hectares. The average household consists of about six persons of which two are under 14 years of age.

Land tenure is on a traditional system that has presented very few legal problems. Ninety-seven percent of Uganda's farmers consider the land they farm to be held in "owner like possession". Loans can readily be made to Ugandan farmers without running the risk of their losing control of the land from which future productivity is to be obtained.

The 1963 agricultural census showed that, although 60 percent of the farmers between the ages of 16 and 45 stated that they were not fully employed on their holdings during the preceding years, 37.4 percent of all farmers employed hired labor at some period. This indicates that current farming patterns involve a highly seasonal demand for labor. The peak labor demands of the annual cash crops quite often clash with that of some staple subsistence crop.

B. Objectives

1. General Objectives:

a. Announced--The aim of the Cooperative Credit Scheme was announced to be another tool in the hands of agricultural extension personnel to increase agricultural production. The Government while adhering to this announced intention did not introduce trained extension officers to the field for credit duties until 1967, and then only on a pilot basis. The Cooperative Department looked on the scheme as a training exercise for members, societies and departmental staff. It was their belief that the pure mechanics and meaning of the word "loan" had to be learned before there could be much of an impact on production.

The scheme very nearly got into trouble when politicians began campaigning for cooperative farms (a mechanization scheme) to be established in their constituencies. Subtle but definite pressure was felt to make loans to these farms regardless of credit worthiness. Rules were relaxed or waived and the error eventually led to the writing off of $130,000.00 in bad debts. Following the debacle, previous rules were reinstated and credit decisions were re-enforced. It is not anticipated that another

error in judgment such as this will be made by anyone who was concerned with the first mistake. With the exception of the emphasis that was laid on "group farming" in the second Five Year Development Plan (1967-1971), original announced goals have pretty well been adhered to.

b. Apparent--Idealism in the attainment of goals must take some practical steps along the path toward success. A scheme to cover the entire country must do exactly that, even if it means loans to farmers in several areas of the country that are less socially and economically developed than others. Because of the uniform cooperative machinery that exists throughout the country, procedures for lending and collecting are identical in the broad sense but are adaptable to local tradition. The announced objectives have generally been followed.

2. Terms of Loans:

a. Purpose--Any cooperative society that is borrowing funds through the Cooperative Credit Scheme must use those funds for productive purposes. It is possible for societies to lend their own surplus funds for social purposes such as payment of taxes, school fees, dowry or funerals, but societies have generally been reluctant to open the gate to an eventual flood of such applications. It is generally recognized that 100 percent repayment of this type of consumptive credit is difficult to attain. The credit scheme does look with favor on projects for specific societies or groups of societies regardless if a workable plan is submitted by the farmer, society or extension staff. Emphasis has been placed on a cotton team spraying plan and loans are encouraged for spray pumps and insecticides. In most cotton growing areas, it has been proven that a 26 percent yield increase is assured if timely and adequate spraying is accomplished. Every farmer receiving a loan for tobacco production must receive certain chemicals with his loan and apply them according to extension advice or be ineligible for a loan the succeeding year.

The announced objective of a planned "package loan" for each farmer borrower has not as yet been reached due to lack of funds, transportation, staff and training. These agricultural extension workers with credit training are working in the Agricultural

Credit Advisory Service which is under the wing of the Assistant Commissioner for Agriculture (Extension).

Wherever and whenever possible, all loans are to be granted in kind. However, in practice, some areas of the country which experience severe labor bottlenecks are forced to employ hired labor. This labor must be paid with cash or with the traditional beer payment, the raw materials for the production of beer being purchased on the local market. Societies have been urged to make direct payment to laborers avoiding the possibility of the diversion of cash funds as it passes through the farmers' hands. This is largely an educative process and it has been found that if a society is strong enough to withstand the extreme pressures brought by the farmers for cash, the idea of direct payment to porters soon gains acceptance.

b. Period--The scheme commenced as a short-term production loan program with only vaguely announced plans for the eventual inclusion of a medium- and long-term lending policy. There has always been a demand from the farmers for two year loans for the production of annual crops. This request has, of course, always been rejected but at times is difficult to explain, even to some senior civil servants who may have little or no knowledge of accepted agricultural lending practices.

Some inroads have been made, however, in medium-term lending for coffee improvement. These medium-term loans have largely been made for renovation of existing coffee holdings. The loan packages generally include tools for severe pruning, mulching and fertilizing. Because of the bi-modal rain pattern and subsequent dual marketing seasons, loans of about 18 months appear to be the most practical if geared to the coffee seasons rather than the calendar.

In addition to these medium-term coffee loans, several noteworthy package loans have been drawn up for selected small farmers who are members of very good societies for the extension of medium-term credit (up to five years) for the purchase of oxen and ox cultivation equipment. More will be said about this service under the technology section.

C. Organization

1. General Structure:

See Organizational Chart at Appendix I.

At this point, it may assist to clarify what is considered to be the key personnel in the organizational and administrative structure. Guidance, policy making and supervision is provided at the national level. Perhaps the key person at that level is the Assistant Commissioner (credit). This is the highest ranking, trained credit officer in the scheme. Drafting of credit policy originates with this officer and subordinates, but is cleared by higher authority within the Department and Ministry. Correspondence concerning the scheme, which comes from district offices, is channeled directly to this officer. This correspondence includes approvals of maximum liabilities (delegated by the Minister), loan application approvals, statistical reporting and qualitative reporting done on a monthly basis. This key officer is also a member of the National Credit Coordinating Committee. This committee meets monthly and is composed of representatives of agriculture, cooperatives and agency bank representatives as well as planning and Ministry of Finance personnel. Its duties are to tackle national policy matters as they relate to the credit scheme and pass recommendations to the relevant ministries for disposition.

Each district is instructed to form district credit coordinating committees chaired by the District Cooperative Officer. Many local problems can be solved by this committee if it is organized and functioning properly. Through this committee, credit personnel have contact with the local chiefs and other administrative personnel whose support is essential for success. In the event of special problems, the committee has the authority to co-opt such persons as veterinary personnel, forest rangers, game wardens, police or any other person who may lend them assistance in reaching solutions to problems pertaining to credit.

2. Local Structure:

Perhaps the success or failure of the scheme rests more squarely on the shoulders of the District Assistant Cooperative Officer (credit) than any other officer. Each district has a minimum of one such officer who has received credit training. It may be well at this juncture to reiterate a few of his more important duties.

-- Select and prepare societies for new intake.

-- Receive, scrutinize and process loan applications.

-- Train secretary/managers, committees and members of credit societies, assisted by the Assistant Cooperative Officer (Education) and the Assistant Agricultural Officer (Credit).

-- Visit, inspect and give advice to credit societies, where required.

-- Where necessary, recommend to the commissioner (1) removal or suspension from the scheme of any credit society not operating within the rules and regulations governing the scheme; and (2) reinstatement of such suspended societies after they gave again proven themselves credit worthy.

-- Liaise and coordinate all loan matters between the authorized bank and society.

-- Control the flow of loan funds.

-- Serve as secretary to the District Credit Coordinating Committee.

-- Hold annual district staff credit conferences.

-- Scrutinize and adjust if necessary the monthly report of loan activity.

-- Answer correspondence concerning credit for the District Cooperative Officer.

At a time when the scheme is expanding, it is extremely important that the Assistant Cooperative Officer (credit) have close contact with the field staff who are trained in credit matters. The job of the A.C.O. (credit) then becomes more supervisory and administrative than operational.

D. Beneficiaries

1. Selection Criteria:

The scheme is open to any farmer who is honest, trustworthy, hard working and a member of a credit worthy cooperative marketing society. While seemingly broad, this criteria is narrowed considerably as follows: A member must have belonged to the society for at least three years and have marketed his produce through the society for each of the preceding three years. This qualification is meant as a test of loyalty to the society and also denotes a man's stability in the community. Because of this qualification, no itinerant is eligible to borrow. A man's trustworthiness is judged by the committee of the society which represents its entire area of operation. The committee is also responsible for knowing about any social weaknesses, a farmer's willingness to accept advice, his health and moral fiber.

There is no limit on the size offarm that the loan is to be applied on, but it is generally felt that a loan package of less than $14.00 would have little or no impact on his farming operation.

2. Graduation Policy:

To be eligible to receive a medium-term loan, a farmer should have successfully borrowed and repaid three short-term loans. This rule has been relaxed in a few cases where the applicant is known to be progressive, loyal and trustworthy. Some cases also arise where short-term credit was not required prior to the farmer's need for medium-term credit.

The scheme has always planned for the eventuality of long-term loans for total farm development that may require a substantial capital investment. This phase has never gotton off the ground for several reasons,

the most important being unwillingness to tie up valuable loan funds on a long-term basis for what would turn out to be the elite farm class. The attitude has been to let those people borrow from commercial sources while the Cooperative Credit Scheme caters to small farmers. The problem of tying up loan funds also arises when making medium-term loans. Because of a tight money situation it is necessary to revolve the fund as rapidly as possible.

3. Number and Types:

The chart at Appendix II shows by year the amount of loans approved for various crops, the number approved and the number of farmers being served under the scheme.

4. Other Sources of Credit:

Farmers participating in the Cooperative Credit Scheme were all debt free prior to borrowing the first time. No provision is made for the refinance of existing debts. As far as can be determined, there are no supplemental borrowing activities, largely because other sources of credit are scarce or nonexistent.

5. Profile of Farm Community:

Two main types of crop farmers are the loan recipients. These crops, cotton and coffee, are mainly distributed ecologically although this has not always been true. Starting in the 1950's there was a gradual shift away from growing cotton in the long grass area. This shift has continued until 1969 when over 80 percent of all cotton was produced in what is considered to be the Northern and Eastern Regions. On the other hand, Buganda and the Western Region produced nearly 90 percent of the Robusta coffee. One district, Bigisu, produced about 55 percent of the Arabica coffee. Cotton is cultivated by 74 percent of the farm families in the country, and this production provides Uganda with approximately 30 percent of her total export earnings.[1)]

Figures are not available as to the percentage of farmers that are able to take advantage of other forms of institutional credit, but it is considered to be extremely low if not infinitesimal.

1) FAS M-213 February 1970, Cotton in Uganda, Page 2.

E. Lending Policies and Procedures

1. Portfolio:

See Appendix Number II for a breakdown by year of the number of society loans, farmer borrowers and crops for which loans were granted.

The number of farmers that have multiple loans has until 1972 been negligible. In 1972, about seven societies will receive multiple loans for re-lending to farmers to cover total farm development. This is a pilot project on which results will not be known until late 1973.

No record is kept on the actual number of loan repeaters, but fairly accurate estimates can be made. About 60 percent of the annual society loans have been made to repeaters. Of this 60 percent, it is estimated that about 80 percent of the farmers are also repeaters. These percentages will of course increase as the scheme ages. It is not uncommon to have a society participate in the scheme for several years, drop out one year because of defaulting, and rejoin the scheme after one year in which loan defaults were collected. Only about 12 societies have maintained a perfect record of 10 consecutive loans since the beginning of the scheme. Hence, it is safe to assume that less than 2 percent of today's farmer borrowers have had credit scheme loans for 10 years.

2. Interest Rates:

Cooperative byelaws enable a cooperative society to lend to their members at a rate of 12 percent per annum. This farmer rate has been in existence since the start of the scheme and is likely to continue for some time. The cooperative law does, however, provide for the society to recommend an interest rebate to its members with the approval of the Registrar of Cooperative Societies. It is known that some societies arbitrarily charge less than the statuatory rate while others charge more. These cases, extremely minimal, are explained mostly as errors in the computation of interest.

Societies also had a fixed rate of interest to pay during the first eight years of the scheme. This rate was 7 percent if paid on the due date, 6 1/2 percent if paid at least 30 days early and 9 percent if delinquent. The delinquency rate was applied on the

day after the loan became due and continued until full repayment was made.

Agents for the Government funds, whether the Uganda Commercial Bank or the Uganda Cooperative Development Bank receive a 2 percent agency fee for handling the loans. The agency institutions, particularly the Commercial Bank have claimed that 2 percent was not sufficient to cover their administrative expenses, but have not been able to substantiate this claim. The writer seriously questions the validity of this claim as a battle of sorts developed over the transfer of loans from the Commercial Bank to the Cooperative Bank in 1971.

Today, the rate on so-called government funds continues at the basic rate of 7 percent while loans direct from the Cooperative Bank funds are going at an 8 percent basic rate. This rate is still to be considered a subsidized rate as most lending institutions have no trouble receiving 9 - 9 1/2 percent on loans other than credit scheme to cooperatives, even on a Government guarantee basis.

It is interesting to note that there is very seldom any complaint from the farmer on the amount of interest he is paying. This may be an indication on his part that his economic return on borrowed funds far offsets his interest costs. It has been proved, for example, that a simple 4 times DDT spraying of cotton will, on the average, increase yields 26 percent in addition to improving quality. It then stands to reason that the borrowing of funds for sprayers and insecticides is economically advantageous.

Inflation has not been a problem since the start of the scheme. Estimates are not available on the real cost of credit.

3. <u>Collateral</u>:

It is necessary to discuss collateral on two levels: society and individual member. A society must sign three basic security documents consisting of: (1) the instrument of charge which is a loan contract with the authorized lending agency. (2) A letter to the Union in which the society instructs the Union to which it is affiliated to pay to the bank all commissions, interest and bonuses that are due to the society by the Union. This is

perhaps the basic security document in the system because it gives as security not only the crop which is being grown with the loan, but all subsequent crops grown not only by the borrowing members but by the whole of the society. (3) A Letter of Setoff which authorizes the bank to transfer any money on any other account the society maintains to the loan account, if it becomes defaulted. Societies must each have a deposit account for all spare cash in addition to their loan account.

Members loans are secured mainly by a bond that authorizes the society to deduct the amount of the loan, plus any accrued interest, from the sales of any produce to the society. In addition, two co-signers or sureties that are also members of the society pledge that they will repay the loan to the society if the applicant fails to repay by the due date. All signatures are witnessed and signed or thumb printed. The requirements that are in existence today are the same as when the scheme started.

4. Other Subsidy:

It was recognized before the start of the scheme that the level of society management had to be upgraded from the average that existed at that time if we were to expect a reasonable system of record keeping to be implemented. This meant that many societies had to either send their Secretary/Managers on a residential credit course or employ someone of a standard acceptable to the Commissioner for Cooperative Development who could attend the required course of instruction.

To employ personnel of an acceptable standard meant that primary societies who were to participate in the scheme for the first time may find difficulty in meeting their financial obligations. For this reason, the Government agreed to subsidize the salaries of the Secretary/Managers for the first three years of operation in the scheme, assuming that the societies would be financially strengthened during those three years to a point where they could assume the entire responsibility for the payment of salaries.

Minimum salaries of $14.00 per month for the Secretary/Managers were set and Government agreed to subsidize this as follows: Each participating society would receive

a subsidy of $10.70 per month for the first year of operation; $7.15 per month during the second year, reducing to $3.60 the third year and nothing after that time. This subsidy scheme is still in existence at the same rate, but salaries of secretary/managers have risen appreciably during the ten years of operation. Fortunately, society income has kept pace with the increase of salaries so that little difficulty has been experienced in meeting the payroll.

5. Appraisal Techniques:

Appraisal techniques like collateral must be discussed as two separate issues, societies and members.

A member must meet the legal requirements for borrowing before the committee of the society can accept his application. A staff member of the Cooperative Department should therefore be present at the committee meetings to make certain the following requirements are met:

A member must (1) have been a fully paid up member of that society for at least three years; (2) have marketed produce through the society for each of the past three years; (3) be able to produce two other members who will stand surety for him, guaranteeing repayment of his loan; (4) be acceptable to the committee and known to be an honest and hardworking farmer with no record of debt default; and (5) be not currently in debt to the society or any other money lender or credit institution.

The committee then appraises each individual loan application on its own merits, taking the following into account: (1) That the applicant is physically and otherwise able to manage and perform agricultural work of the type proposed; (2) that he is generally known to be a person of acceptable integrity and industry with a satisfactory history of meeting obligations; (3) that he has control of a suitable tract of farming land for a period at least equal to the life of the proposed loan; (4) that he is a person who will accept and follow valid technical advice with respect to agreed farm improvement; (5) that he is a person who can be trusted to use all loan funds in the manner planned and contracted; and (6) that he is prepared to undertake orderly repayment of the loan.

The criteria for appraisal of societies to enter the scheme mainly concern the viability of its operation, past history and management ability. The main criteria are: (a) the society must have been registered not less than three years earlier and have operated in each of the three main annual marketing seasons prior to selection; (b) it must have kept complete and accurate records of produce deliveries by its members during those previous three or more marketing seasons; (c) it must have shown itself stable and credit worthy for at least the past two years. The general meeting, committee and staff have shown that they closely and correctly follow the society's byelaws and are receptive to advice; (d) it is financially sound and has no cash or produce shortages nor excessive overages of produce or cash. There must be control over expenditure, particularly committee expenses, travelling costs and wages; (e) it has sufficient funds of its own to meet the costs of all equipment and stationery required to operate the scheme, and is likely to have sufficient income to pay its own share of the Secretary/Managers salary. The members too must have substantial shareholdings in the society and the society must have a reasonable amount of shares in the District Cooperative Union; (f) it must have no overdue debts due to it by its members; (g) it cannot be in debt to its union or anyone else other than as properly provided for in the law or by the terms of any loan agreement. Its crop finance must be repaid promptly and in full; (h) the committee must understand the procedure of operating the credit scheme and the general meeting must have resolved that it wishes to participate in the scheme and to abide by the rules of the scheme; (i) it must have someone with the necessary integrity and capability to be trained as a manager; (j) the society must have adopted the new model byelaws.

It is appreciated that some societies may not have reached the above standard of perfection. Therefore, if it is progressing, trying to improve its status and is following advice, it may be selected for participation although in such cases the Commissioner for Cooperative Development may lay down further safeguards to insure that society's success.

In addition to the general criteria listed above, a society must possess a well-built store with an office and safe, a full set of required books, and a common seal.

F. Collection

1. Repayment Record:

Appendix III shows the present position of loan defaults,

by year and district. No records are available to show the annual amount of default since the start of the scheme. Various papers do however indicate that a bad year has generally been followed by a good year in which most of the defaults have been collected. The last 63/64 defaulted loan was collected in full in 1972. It is believed that all credit scheme loans are collectable unless a society becomes bankrupt.

Member default is difficult to assess as no records are kept on a national level. Each loan application is accompanied by a statement showing the number and amount of member default. Generally, if members default exceeds 20 percent in any year, a new loan is denied until more than 90 percent of the previous loan holders have paid in full.

It may be well to point out at this juncture and to emphasize that no society is eligible to receive a new loan until the previous loan has been paid in full, with interest. Likewise, no member may borrow from a society if he is a debtor on a previous loan. These rules, when strictly adhered to put tremendous economic and social pressure on defaulting societies as well as members.

2. Methods:

Because the cooperative marketing societies handle the produce for which the loans are granted, all loan payments are made at the time of marketing. All societies must pay cash to the farmers upon delivery of their crops, so it is a simple task to collect loans first, and pay the producer the difference between the loan and the produce sold.

Each committee member is responsible for supervising all borrowers that live in the same area in which he resides. In addition to other duties, committee members are empowered to (a) ensure that loans are applied to the purposes for which they were granted, (b) supervise the loans after granting them, (c) suspend, recall or stop loans which have not been properly utilized.

Sometime prior to the beginning of each marketing season, the committee members should call on each borrower to remind him of his obligation to repay the loan. During the season, they should again call on the members to ensure prompt delivery of harvested produce to the

society. In the event of default, it is again the duty of committee members to call upon the sureties for payment.

The society should take loan payments to the agency bank on a weekly basis to avoid temptation to misuse loan funds and as a security measure against armed robbery. All credit scheme funds should be kept separate from other funds belonging to the society.

3. Special Endorsement Procedures:

In the event of default, it is the duty of the committee members to call upon the sureties or co-signers for payment. Needless to say, these sureties can apply merciless pressure on the loan holder if some of their funds have been deducted by the society.

In the event of mass default, a society may declare a dispute with its defaulters under the Cooperative Societies Act. The Registrar of Cooperative Societies may then appoint an arbitrator who will probably make an award in favor of the society. This award is sealed by the court and terms of repayment must be met in accordance with the wishes of the arbitrator. If payment is still not effected, the court is empowered to seize and sell any of the defaulters personal property. This procedure is rather cumbersome and seldom if ever comes to the ultimate conclusion.

Traditional custom empowers some committees to act against defaulters if the permission of the local chief has been given. It is not unusual in such cases for a committee to confiscate defaulters bicycles, goats or other personal property. It is well known that in cases of a few defaulters being responsible for an entire society's being declared not worthy of credit, extreme pressure is applied to "save the good name of the society".

4. Rescheduling:

Under normal circumstances, there can be no question of loan extensions. Because a borrower is not eligible for additional credit if he has defaulted for any reason, members are generally convinced to repay their loans from some source. If, however, some natural disaster results in a total crop failure, the repayment period of the loan can be extended up to one year. Normal procedure is for the District Agricultural Officer to visit the area to certify as to the extent of the disaster. The District Cooperative Officer forwards the District

Agricultural Officer's recommendation to the Commissioner for Cooperative Development together with his own recommendations. If the claim is judged legitimate, the Commissioner then instructs the authorized bank to extend the loan and the penalty rate of 9 percent is waived.

Loan extensions are extremely rare, occurring on the average of once or twice in a loan season.

G. Costs and Finance

1. Portfolio Profits and Losses:

Until 1972, it was generally considered that funds available for lending were 1.4 million dollars. Special projects, expansions in specialty crops, etc. added about another $470,000.00 to the funds available for lending. It has been calculated that the 1.4 million dollars could be eroded by about .5 million dollars and annual loan approvals could be maintained at about 2 million dollars. This makes two assumptions necessary: (1) Loan defaults in any one year should be offset by repayments on previous defaults to maintain a defaulted loan portfolio not exceeding .5 million dollars. (2) A diversified loan portfolio would permit the available funds to revolve about 2.2 times annually.

A crisis arose in 1972 when 1971 approvals rose to 2.7 million dollars and loan withdrawals exceeded the available funds. The cooperative bank released about .4 million dollars of their own funds to cover the shortfall temporarily and Government also released an additional sum of .43 million dollars as additional assistance. As 1972 progressed, it became apparent that the demand for loan funds far exceeded the supply of money and loan approvals were temporarily suspended in August 1972.

Unfortunately, no long-term solution to this problem has been found and some areas of the country, mostly robusta coffee, will necessarily undergo a drastic reduction in loan funds. As previously mentioned, the advent of medium-term loans has compounded the problem by restricting the rate of turnover.

2. Administrative Costs:

No reliable data is available on the administrative costs of the program. The entire administrative cost is borne by the Department for Cooperative Development as part of the development costs of the entire department. Supervision of loans at society level by the department are considered part and parcel of their ordinary day-to-day duties. This supervision force at society level normally handles a host of other responsibilities such as audit, marketing supervision, training and attendance at committee and general meetings.

Technology, handled by the Agricultural Credit Advisory Service of the Agriculture Department, is considered to be part of the development cost of the extension arm of that department. Again, no figures are available nor are cost benefit estimtes made.

3. Beneficiary Savings:

As previously mentioned, no borrower is permitted to borrow an amount that exceeds 10 times his shareholding in the society. This has not been, nor was it intended to be a stimulus for member investment in the societies.

Members have always been encouraged to save within their society but with the exception of Ankole District, provision to accept and supervise deposits was virtually nonexistent. Starting in 1972, a campaign was launched that provided the system, as well as supervision, for a concerted effort in rural savings. It is an acknowledged fact that surplus money is available in rural areas if people can be convinced of the security of their funds. To date, approximately .4 million dollars have been mobilized in rural areas through this scheme. All of this money will be available to flow through the agricultural sector of Uganda's economy as savings are invested in the Cooperative Development Bank rather than flowing to the commercial sedor through commercial banks.

This resource has previously been untapped as very few rural areas are served by commercial banks. Further development could turn virtually every one of Uganda's over 2,000 primary cooperative societies into rural savings bank. Savings to date are considered to be what was previously "mattress money".

4. External Finance:

There has been no external finance as far as the ordinary Cooperative Credit Scheme is concerned. In 1968, the British Government loaned .47 million dollars to finance the foreign exchange component of the tobacco expansion scheme in the Middle North tobacco growing areas. Funds were largely used for the purchase of galvanized corrugated iron sheets for curing barn construction. These loans were made to farmers for 5 years with annual installments to be met from increased tobacco production. All criteria concerning farmer and society eligibility were waived for this special project with the inevitably resultant delinquencies exceeding 80 percent in some cases. Since that time, tobacco production, medium- and long-term loans have been turned over to the Smallholders Tobacco Project, a joint venture of the Uganda Government and the I.D.A.

Production loans for growers existing prior to the effective date of the Development Credit Agreement are still being financed in part from credit scheme funds. This year, 1972, the cooperative bank lent about .54 million dollars from their own funds and credit scheme funds to the tune of .25 million dollars were turned over to the project authority for disbursement to their established growers.

In all likelihood, bad debts resulting from the rapid expansion will be reimbursed to the credit scheme by the project authority as tobacco cess funds accumulate. Preliminary discussions have been held with that objective in mind.

There has been no rediscounting of credit scheme loans to date nor has there been any government guarantee involved.

5. Institutional Solvency:

A credit agency as such does not exist in Uganda. Losses of credit scheme funds totaling .13 million dollars were incurred when the group farm loans which were previously explained were written off by reducing the amount available for lending.

6. Foreign Exchange Balance:

No facts are available on net impact of the program on foreign exchange reserves. It is only assumed that

production increases far outweigh any losses due to importation of agricultural inputs.

H. Complimentary Factors

1. Technology:

a. Directing, Tying and Packaging--Policy dictates that "as far as possible, loans should be issued in kind". Nearly 60 percent of all loans funds go for labor for machinery, opening new land, weeding, picking and sorting. Where this hired labor must be paid for piece work, daily or even weekly, it is extremely difficult for societies to maintain absolute control over cash payments for this labor. When absolutely necessary for farmers to draw cash, they are encouraged to withdraw small amounts several times to avoid the temptation of misusing funds. Committee members are instructed to assist in supervising these borrowers.

b. Program Extension and Supervision--As previously mentioned, the Agricultural Credit Advisory Service which is an arm of the extension service of the Agriculture Department is responsible for technical supervisory services. When this pilot service started in 1967 it was the intention of Government to have a ratio of 1 staff member per 300 borrowers. To date, only about 55 such staff members are on board so their duties have been revised to concentrate their services at society level more than with individual members.

A typical Assistant Agricultural Officer (Credit) will meet with the committee of a credit society prior to the new loan season and will draw up a "master" loan package for a typical farm. This package will include mechanical cultivation (1st and 2nd plowing) purchase of improved seeds, fertilizer, herbicide, insecticide, tools, labor, etc. The committee can then apply these packages to members requirements according to their own available financial resources, labor availability, size of operation and society production targets.

The Assistant Agricultural Officer (Credit) then keeps visiting the society and spot checks what probably amounts to 10 percent of the loan holders. Administratively, he is involved with coordinating mechanization, training, method demonstrations, result demonstrations and one-day field courses for loan

holders. When possible, farm tours are arranged to visit loan holders to see the actual results of proper application of loan packages.

c. Other Arrangements for Technical Transfer--Ordinary Agricultural Department extension staff in the field are not trained in credit supervision nor do they fully understand the meaning and value of credit. We do find, however, that this extension personnel have a tendency to concentrate their efforts in areas where credit is available. They have found out though experience, for example, that recommending a spraying operation to a farmer without a sprayer or means of purchasing one is a waste of valuable time. If, on the other hand, recommended inputs can be purchased with borrowed funds, dramatic results can be obtained.

Another interesting bit of psychology induces the farmer to borrow funds for practices that are new and untried by himself or his neighbors. In his mind, if the practice doesn't work, he is not obligated to repay the loan. It seems then that new practices are easier implemented with borrowed funds than they are with meagre personal resources.

d. Nature of Technology--Various research stations in Uganda are operated by the Agriculture Department. In addition to this there is an extensive agricultural research program at Makerere University and other projects under the auspices of the East African Community.

All employees of the Agricultural Department are provided with handbooks that give the following basic recommendations: Ecological locality, soil type, varieties, planting material, plant spacing, mulching, soil erosion, pruning, fertilizing, harvesting, pest control, disease control, seeding rate, land preparation, thinning, drying and sorting.

Agricultural assistants receive a certificate after completing two years of agricultural training while the three-year diploma graduates receive diplomas. Education requirements to gain entrance are a Cambridge School Certificate with minimum standards set in certain courses.

Technically, Agricultural Assistants and Assistant Agricultural Officers are well enough equipped to transmit technology to the farmer.

2. Supplies and Sales:

a. Program Supplies--Normally, all credit societies should stock the supplies recommended in the member borrower's loan packages. The chain is as follows: When individual requirements have been ascertained they are bulked together in one order which is forwarded to the District Cooperative Union to which the society is affiliated. The union bulks all society orders and forwards one order to the Uganda Cooperative Central Union which either imports direct from manufacturers or obtains goods from wholesalers. Goods are then delivered to the unions which re-distribute to the societies. Upon receipt of the goods, the society authorizes its bank to debit their loan account with the total amount and credit the unions account. As goods are collected by the farmers, their individual loan accounts are debited to complete the chain. Problems with the system will be discussed under Section III, C, 3.

b. Program Infrastructure--While no official program exists for construction of infrastructure, societies are encouraged to improve on existing storage facilities to cater for the inevitable increased production. Societies are occasionally requested to improve on existing access roads to facilitate the removal of purchased produce. In extreme cases, loans are conditional to simple self-help projects.

c. General Access and Availability---In the past, local traders have generally been able to meet the demand for inputs. If, however, a particular society is advised to buy quantities of certain commodities, limited supplies are insufficient to meet the demand. Normally, additional supplies are ordered, but arrive too late to be of use to the farmers.

Limitations in access to supplies have reduced the impact of the program, but the major emphasis is laid on timely operations and general farm and crop management practices.

d. Guaranteed Sales and Price Supports--All loan recipients that grow either of the major cash crops, cotton or coffee, are assured of a market as well as a guaranteed price. Prices, however, are not fixed until just prior to the marketing season, so have very little

affect on production until the succeeding year. There seems to be very little fluctuation in price from year to year except in the 66/67 cotton season when prices were reduced by 30 percent which seriously affected loan repayments. The after effects are still felt today as can be evidenced by the default that still exists as indicated in Appendix III.

Prior to the marketing season, cooperative unions, the processors, arrange loans with which to purchase the forthcoming crop from the primary societies. The primary societies draw against this so-called crop finance to pay cash to the grower upon delivery of his produce to the primary society store. The processing union transports the purchased crop to its ginneries or factories and returns cash to the society to revolve again the process of purchasing and selling. At the end of the season the crop finance is returned to the unions and the unions repay their borrowed funds.

The unions sell the processed produce to either the Lint Marketing Board or the Coffee Marketing Board as the case may be. Both boards are para-statal organizations that export or contract for the export of the processed and graded coffee or the baled lint.

It is estimated that about 70 million dollars are used during the period of one year for the purchase of all crops. Nearly all of this crop finance money is provided by overseas banks, branches of which exist in Uganda.

The price paid by the boards to the unions is based on a formula that takes into consideration processing efficiency, quality, grade and volume. Unions, however, pay societies the same amount as societies pay the farmer. The societies income arises from the payment of a buying commission from the union that is generally sufficient to cover operating expenses and leave a small profit. Unions which operate efficiently are normally able to accumulate surplusses which in turn are paid to the societies in the form of bonuses or patronage refunds after the 25 percent allocation to statutory reserves. Most societies re-distribute this bonus to members in the form of cash according to patronage, again after deduction of statutory reserve requirements.

The Government policy of cash to farmers upon delivery of produce has undoubtedly contributed greatly to the growth of the cooperative movement in Uganda.

e. Insurance--There is no crop insurance available for the mass of farmers. Tobacco farmers are, however, able to insure their harvested crop against fire loss while it is in the process of flue curing.

f. Other Program Marketing Arrangements--A few efforts have been made to make loans to farmers from crops other than cotton or coffee. These attempts usually end up in frustration or failure due to lack of marketing arrangements, transportation or storage. Examples are groundnuts which usually end up being consumed, maize which deteriorates rapidly when no market can be found or food crops which go to the local markets for consumption.

g. General Marketing Conditions--Again, a guaranteed market for cotton and coffee ensures the sale of all the increased output of these two crops. It is generally considered extremely risky to finance any crop which is consumable or for which there is no guaranteed market.

h. Profits and Risks--While only scarce documentary proof is available, indications are that extremely simple agricultural innovations, the by-products of credit, do increase profits. Several unpublished studies have shown income levels of borrowers increasing by 40 percent in one year when accompanied by extension advice. These simple innovations include pruning, spraying, mulching, mechanical cultivation, fertilizing and pulping.

III. EVALUATION

A. Performance

1. Apparent Uses of Credit:

From the fund usage chart at Appendix IV, it is apparent that well over 50 percent of the funds are disbursed for paying labor. We know that this is a legitimate item, but seriously doubt if all funds borrowed for labor are used for that purpose. Accurate statistics are difficult to obtain for several reasons, the most common being the traditional in kind payment. Under this system, the borrower uses cash to purchase the ingredients for native beer. The laborers then share the beer usually at the completion of a specific task or at the end-of-a-day work. All attempts to increase the amount of in kind loan disbursements are being made and it is certain that the annual amount of cash disbursements of loans are decreasing.

2. Effects:

a. Production--Data concerning the impact of credit on production is extremely scarce. Because of the many outside influences to be taken into consideration when doing a complete, in-depth study, the I.D.A. reckoned it would require about 36 man months of work.

Several studies have however been made, probably the most noteworthy effort coming from a German volunteer, Economist, who has completed a draft report on an Evaluation Study of the Cooperative Credit Scheme in Busoga District, Uganda. In his summary he states, "Many findings, however, allow the conclusion that an increased production and income can be created by the loans and in actual fact this has been realized in many cases." Unfortunately, the entire 84-page report will probably not be released until 1973 so the quantitative substantiation of this comment is not available.

In a similar study done by a team of field workers under the guidance of an Agricultural Economist in the Planning Section of the Agricultural Department, the conclusion was reached that in Ankole District, many farmers using supervised credit increased their net income by as much as 40 percent per year. Again, the full text of this report is not available as tabulation is continuing.

Increased acreage or increased income figures are extremely difficult to obtain. In the previously referred to draft report on Busoga District Credit Scheme by Martin Krauss, German volunteer economist, he found that loan holders (one group who has borrowed for 7 years and another for 4 years) had increased their acreage under cultivation by 34.1 percent over the previous 10 years whereas the control group increased cultivated acres by 4.9 percent.

Because of the lack of records over previous years, realized income records on individual farms are not available. It is possible, however, to compare turnover of credit societies with societies that have not been granted with a credit facility. Krause stated that as a whole, loan holders showed a substantial increase in the value of produce sold during the previous 10 years, but there was no strong correlation between rate of growth and loan size.

b. Farm Income--In a country where cooperatives have been given the monopoly in cotton and coffee marketing, it is difficult to compare members income with that of non-members. Cooperatives accept produce from all farmers, but is is only the members themselves that share in the distribution of patronage refunds or bonuses. Records of individual production become meaningless because non-members frequently sell produce in a member's name so that the member's sales are inflated. It is quite common to find only one member of a large family joining the society and selling produce from all relatives.

As far as can be ascertained, their is little or no loss of farmers income because of the monopoly and government policy of cash payment upon delivery of produce. There can, however, be a loss of members share of the distribution of patronage refund if an inefficient or corrupt committee and/or management has failed to control the society's expenses to a point where all bonuses are required to pay for operating losses or are confiscated to pay a defaulted loan.

c. Technology--It is extremely difficult if not impossible to follow the flow of cash loan disbursement. The impact of loans in kind, however, do have a discernable effect on quantity or quality of produce sold.

When society loan packages for hand operated coffee hullers, pruning saws and fertilizer are designed, managers of coffee factories have stated that there is a noticeable increase in production and improvement of quality in the coffee coming from those particular societies. A quantitative analysis is again difficult because it is not known how many non-members have been attracted to sell their coffee in that society with an eye toward possible future inclusion in the credit scheme.

As previously stated, credit is an additional tool in the hands of the extension agents. Extension workers have a tendency to concentrate their efforts on credit societies. How much of the increased production can be attributed to credit and how much to increased extension activity is impossible to determine. From this, it can be deduced that a spin-off effect of credit is increased extension activity.

The Government operated Tractor Hire Service is another example of this spin-off. Societies without credit facilities are hard put to attract sufficient cash customers to induce a Government operated tractor unit to carry out first and second cultivations. Where a credit society can include many members for the service, the tractor unit can foresee larger income due to less traveling, larger plots, etc. At the completion of the entire plowing job for the society, the society transfers loan funds directly to the government account avoiding the danger of cash collections from individual farmers. The society then debits each member's loan account with the cost of the plowing job.

It is a well-known fact that mechanical plowing increases yields but no data is available to prove if increased yields offset the cost of cultivation plus interest. Another point is that mechanical cultivation is intended to release labor for labor intensive duties on subsistence crops. To what extent credit merely finances leisure time is not known, however, Krause's report states that 38 out of 72 farmers stated that loans enabled them to enlarge their acreage under cultivation and 23 stated that their income increased. One-hundred percent of the farmers interviewed stated that loans were advantageous to them.

d. Savings and Other Sources of Finance--While the Rural Savings Scheme is considered to be separate from the Credit Scheme, it is difficult if not impossible to completely separate the two. Supervision of the Savings Scheme is carried out by the same staff that supervises credit. Presently, one of the qualifications for entry into rural savings is that the society must be in the credit scheme. This qualification arises from the fact that a full-time society employee, the Secretary/Manager, is required to administer the scheme. At the same time he has had basic bookkeeping training and the society is certain to possess all the necessary records, an office, safe and furniture.

Rural savings had its start in Ankole District in 1963. Total savings to date in Ankole are $85,700.00. Total savings for the whole of Uganda are $357,000.00. Until 1972, no real effort was made to promote savings in rural areas due largely to Cooperative Department staff shortages. Since then, a savings section has been established, bookkeeping procedures standardized, stationery printed and training and operations manual printed.

With nearly 700,000 farm families as primary society members, the potential for getting "mattress money" into the mainstream of the agricultural economy appears encouraging.

The flow of rural savings money is as follows: Members deposit money in their savings accounts at primary society level and have their passbooks and savings ledger accounts credited. The societies deposit this money in their branch of the Uganda Cooperative Development Bank in a separate savings account. The money or a portion of it then becomes available for credit scheme lending under the control of the Headquarters Office. All deposits are insured from the point of original deposit. Members are encouraged to let their savings accrue by offering loans against their deposits should the need arise. Should a member wish to withdraw his savings, a request is made to the society which is passed to the branch for payment. After society officials collect the money, it is given to the member who has his passbook debited.

All branches of the Cooperative Bank maintain mobile banks which travel from society to society during periods of peak deposits or withdrawals to

facilitate the procedure. This also minimizes the risk or danger of misuse, fraud, embezzlement or theft.

Interest paid on deposits ranges from 0 percent on some small-sight deposits to 6 percent on fixed term deposits (1 year) exceeding $14.00.

The coming 5 years should see the inclusion of all credit societies into the rural savings scheme.

With Uganda's vast rural population and dedication to the cooperative movement, the goal is for ultimate self-reliance in the field of agricultural finance.

e. Employment--The vast majority of loan recipients employ labor. Krauss notes that the average farm studied had 3.9 family members working regularly on the farm. In addition to this they employed 0.8 full time and 2.6 part time laborers.

It has been observed that the admission of a society into the credit scheme creates a demand for labor. If loans are used for mechanization, the acreage under cultivation increases and makes the employment of labor for thinning, weeding, picking and sorting necessary. If the loan packages include the hand opening of the new land, trees must be cleared before hand digging can commence. Again, acreage increases, requiring labor for hand task work.

Tracing the flow of loan money paid out for labor has not been possible. Interviews with farmer borrowers indicate that the infusion of credit in a given area seems to drive the cost of labor upwards. It is quite possible that previously unpaid family labor makes some demand for cash payment once it is known that a loan has been granted within the family.

f. Political and Social Structure--Farmer members of credit societies undergo very subtle but definite social change. Loan recipients become regarded as elite, fortunate and lucky by their fellow members. Committee members are also subjected to social stress during the period of selection of loan recipients. The committee members, themselves regarded as leaders in the community, generally reward themselves with the largest loans. Regulations prevent the committee from borrowing in excess of 15 percent of the loan in aggregate. If a committee member defaults, he is

automatically suspended from the committee. These committee members can usually be urged to repay their loans early to "set a good example" for society members.

Politically, the cooperative movement has been the breeding grounds for leaders to establish a strong power base before moving into politics on a full-time basis. While completely neutral in terms of politics, religion and tribalism, a power base once established in the cooperative movement is likely to remain uninhindered.

The question of political interference in the movement does not arise, however, in a military government.

3. Progress Towards Other Objectives:

One of the real benefits of the credit scheme has been the cooperative education spin-off that has resulted from courses for members, committee members and Secretary/Managers. There is undoubtedly more cooperative extension effort being put forward on credit societies than ordinary marketing societies.

Record keeping is generally considered to be of a much higher quality and closer adherence to cooperative principles is observed.

Every Secretary/Manager of a credit society must attend a minimum 2-weeks residential course prior to his acceptance for the job. The suggested training syllabus includes bookkeeping, secretarial practices, principles of management, cooperative law, reports and estimates, agricultural credit advisory service, cooperative finance and rural thrift.

One day courses at society level are organized for ordinary society members. During these courses, cooperative principles, the cooperative law and society byelaws are discussed to give the ordinary member a better insight into the working of his society.

4. Image:

a. Farmer Attitudes--The writer himself has visited about 150 credit societies annually over a period of

more than five years. During each question and answer period, the farmers themselves are urged to relate their problems and make any comments they feel would benefit the scheme. Invariably, they would like to have larger loans and to extend the program to include more farmers. Krauss's report reveals that 100 percent of the farmers interviewed state that credit is desirable and wish to have the program expanded. Farmers want to have individual borrower supervision increased and required inputs made more readily available. There is also a large demand for medium-term credit although its meaning is not fully understood.

b. General Image of Program--The image of Uganda's Cooperative Credit Scheme seems high among outside observers. On occasion, the F.A.O. has sponsored study tours from West African countries to observe the scheme. The I.B.R.D. Permanent Mission to East Africa has on various occasions expressed interest in the scheme and has chosen the scheme as the vehicle through which small farmer credit is extended through the Smallholders Tobacco Project, a joint project of the I.D.A. and the Government of Uganda. Agricultural Cooperative Development International, the technical assistance media on contract with USAID considers the scheme to be the most successful cooperative credit endeavor in existence in the developing world.

Government image will be discussed under Section III, C.I.

B. Evaluation Procedures and Feedback

1. Program Evaluation Procedures:

Monthly credit reports from each district are made as part of the noraml monthly reporting system. Items covered are number of credit societies, number of all societies and membership, loan funds disbursed to societies during month, loan funds disbursed to members during month, loan purposes, rural savings and narratives concerning problems, achievements, the Agricultural Credit Advisory Service, and amount of deposits.

The Agricultural Credit Advisory Service receives a monthly report from each Distrct concerning the following: Weather, crops covered by loans, number of societies under supervision of the service, number and subjects of

result and method demonstrations, farm tour, farm visits by staff, meetings attended, cultivations being carried out, cotton team spraying, record keeping, marketing, farm plans conceived, and general prospects for the service.

The Cooperative Department receives a copy of the Agricultural Report and Agriculture receives a copy of the Cooperative Report.

Perhaps one of the greatest innovations in statistical reporting was made in 1968 when all loans were computerized. The system works as follows: When a loan is approved at Cooperative Department Headquarters is entered in a master loans register and given a serial number that remains as its identification number and is never duplicated. In addition, the loan is coded, each code showing district, registration number of society, type of loan (short, medium, machinery, livestock, etc.) type of crop for which loan was granted, year in which loan was granted, month due and year due. This code is a series of 10 digits and letters that is easily read.

When a loan account for a society is opened in the authorized branch bank, the bank initializes this loan on its monthly report and thereafter reports all debits and credits according to its index or serial number. Debits include interest, principal and any other charges while credits are all payments made on the loan. Each branch bank submits this report monthly to the Cooperative Department Credit Section which checks reports, and compiles them for bulk submission to the Uganda Computer Services in the Ministry of Finance. The computer service then prints an edit control and an up-date control that is checked for variances. When no variances occur, the following reports are printed: (a) Bank report which shows monthly transactions and totals by bank. (b) District report by district, crop and year which goes to each district Cooperative Officer. (c) Summary of loans by year due, crop and district; and (d) Analysis of loans due for the coming 12 months. Spot checks done several times a year indicate an accuracy of 99 percent on this reporting system.

The one big reporting drawback is a lack of statistical data at individual farmer level. Several types of reports to be completed annually hve failed to give the desired results. An enormous amount of time,

energy, staff and organization is required if reliable data is to be compiled. Because of a lack of this type of information, very little evaluation other than observation is done at farmer level.

Primary society records include a produce delivery ledger that shows the amount of produce delivered by each member. This ledgeris not a 100 percent indication of a member's production because of other sales being made in the member's name.

Major research is required. An IBRD mission calculated that approximately 36 man months of expert evaluation plus enumerators would be required to carry out such an evaluation. Time, resources and manpower are not presently available for such a task. Problems encountered would be the variation of crops, scattered societies and remote farmsteads. It is not uncommon for farmers to travel 5 - 7 miles on footpaths to make produce deliveries. Differences is tribal attitudes toward credit would make an interesting sidelight to the study. This important aspect of such a study would certainly require the services of a socialogist on a survey team. The Agricultural Credit Advisory Service embarked on a program of encouraging farmers to keep records in 1971. This exercise is extremely time consuming in that individual calls must be made on a monthly basis to ensure accuracy and completeness. The system, while extremely simple, should provide a nucleus of reliable data in a few years. To date, 128 Ugandan farmers in the credit scheme are keeping such records. This program is designed to expand as rapidly as the availability of supervisory personnel dictates.

2. Feedback and Changes in Program:

Strongly, program evaluation procedures have done little to alter the scheme. Rather than alter, they have tended to consolidate the original thinking on criteria, selection, operation and supervision of the scheme. At various times, it has seemed expedient to alter procedures in order to qualify loan recipients more rapidly in order to get a particular project "off the ground". Two notable examples are the Group Farm Scheme and the 1967 Tobacco Expansion Project. As previously mentioned, they both met similar fates, one resulting in loan write-offs and the other in serious defaulting.

The Agricultural Credit Advisory Service in the Agricultural Department is, however, a result of program evaluation.

Dynamic credit must be supervised, preferably at individual farmer level, or lacking sufficient staff, on the group (society) level.

C. Problems

1. Government Level:

Perhaps the biggest problem facing the scheme at Government level is getting the hierarchy to understand what the scheme is, how it's administered, its objectives and requirements for continued success. The ever present quest for funds is a direct result of this lack of understanding. Meetings are convened only to find that junior civil servants have been sent to attend. A great deal of time is being spent trying to reach the senior personnel who are "too busy with important assignments".

Another real bottleneck is the lack of continuity among trained staff. After a considerable period of training, a credit man is taken from the job for other duties, leaving an untrained, possible junior officer to deal with the administration of the scheme. There seems to be an ever present need for training additional staff.

There has been a long standing argument over specialization. On one hand you have the believers that a good civil servant should be able to fulfill any assignment he is given while the other side rightfully but futilly argues that technical knowledge is essential in a specialized field such as credit.

Government staff members working on credit are unable to visit societies regularly due to lack of transport or lack of funds for travelling. It is not uncommon for training facilities to be closed because of lack of funds.

It does not seem practical to allocate special funds for special schemes because of petty jealousies that arise if one section or another is "favored".

Solutions will be discussed in the conclusion of this section.

2. Program Level:

Because there is no agency as such, a brief discussion of the authorized banks may be in order.

It has been difficult to impress upon the banks the urgency and necessity of filing monthly statistical reports. Training of key personnel in authorized banks was necessary to implement the uniform statistical reporting methods. If one of these key personnel are on leave, sick or is transferred, it is difficult to motivate bank management into solving the problem internally. There are very few branch managers who are really knowledgeable in the operation of the Cooperative Credit Scheme. The limit of their interest seems to focus on the 2 percent agency fee that is collected for keeping the books.

The result of this complacency is the necessity to make personal calls on all authorized agents of credit scheme funds which is both costly and time consuming.

Out of fairness, we should state that the Cooperative Bank branches seem more willing to devote time and energy largely because the customers are a common concern to both bank and department.

3. Farm Level:

The system of farm supply input is not well defined. Quite often supplies arrive too late, in the wrong quantity or not at all. To be effective, the motivating force must be the district unions who bulk orders for the societies. Payments for goods lag far behind the necessary 30 days which ties up valuable operating capital for the central wholesale supply organization, the Uganda Cooperative Central Union. There is a natural reluctance to accept orders for goods because of this bottleneck.

The Government operated, highly subsidized Tractor Hire Service is recognized as being inefficient and insufficient. In 1969 for example, one district approved loans for 6,000 acres of plowing only to find that the Tractor Hire Service could only complete 25 percent or 1,500 acres of the requirement. There is also the inevitable delay in cultivation that results in such a situation. Timely operations are a necessity for good yields.

In cotton growing areas, one of the biggest detriments to early repayment of loans is lack of storage facilities and transport. When society stores are full and transport is lagging, farmers are tempted to transport cotton

to neighborning societies that do have storage space, thus avoiding loan repayments.

Special solutions to the above problems have, however, been found. Some cooperative unions have purchased tractors to augment the depleted government fleet. The organization seems to be somewhat improved in that the control of their usage is passed on to the societies themselves which reduces corruption and slow downs. In areas free of tsetse fly infestation, ox cultivation is rapidly expanding. In the largest cotton growing district, more acres were plowed by oxen in 1972 than were plowed by tractors. This highly desirable trend is expected to continue and accelerate.

The storage and transport bottleneck is being broken by a massive store construction campaign at primary society and union level. The Uganda Cooperative Development Bank is financing a large portion of the construction campaign through the district cooperative unions.

D. Conclusions About Small Farmer Credit:

Uganda's Cooperative Credit Scheme is perhaps unique in several ways. It is the author's opinion that the scheme benefits from the "two layered" lending. If a farmer fails to repay his loan for any reason, his cooperative society remains liable for the debt. This debt can forcefully be collected from the society which keeps the money in the mainstream of agricultural credit. As long as the policy of no new loans to a defaulting member or society remains in force, it is highly unlikely that the loan funds will be completely eroded through loan delinquencies.

It is also difficult to imagine any type of small farmer credit program succeeding unless there is a firm hold on the marketing channels. Loans must be deducted at source.

Lending to small farmers in a developing country is largely an educative process. From the top of the hierarchy to the smallest farmer, education is the name of the game. In many of the vernacular languages, the translation of the word "lend", is give. It is surprising to note, even after 10 years of operation in Uganda, that many of the farmers do not realize their

loans have to be repaid until the actual deduction is made at marketing time. It is natural for such farmers to treat loan advances as income.

A constant battle is being fought against personnel at high level in lending institutions, some of them international in stature. There is a mistaken belief that if a farmer's income is increased by 25 percent in any one year, the following years loan can be reduced by that amount, reaching the ultimate conclusion that the farmer is self financed and there is no longer a need for short-term production credit. Of course, the opposite is true. The larger the profit, the faster the rate of growth and hence the need for an expanded line of credit.

This author would also like to take a stand against the people who measure the success of a credit program by the number of farmers that are served. In Uganda, the Cooperative members number about 600,000 farm families. It is my estimate that about 50 percent of these farmers belong to credit worthy societies which reduces eligible borrowers to 300,000. Of these 300,000 eligible borrowers, only about 50 percent are credit worthy which further reduces the number of potential borrowers to 150,000 farm families. At an average of six persons per family, the total is 900,000 out of an approximate total farm population of 9,000,000. To the people who look at numbers, I would like to ask how many people are deserving of unsecured credit in developed countries, where lending conditions are nearly ideal?

In Uganda, the potential for increasing the number of farmers served lies in education. Increase the number of credit worthy societies and the number of borrowers will increase correspondingly.

All possible effort must first be made to grant loans that are collectable. If one person or society is allowed to default, the door is open for wholesale non-payment of loans.

1. Major Problems of Small Farmers:

The most critical problem of small farmers in Uganda is the labor peak that causes cultivation of cash crops to conflict with the growing of traditional subsistence crops. Planting additional acreages will

not necessarily increase production if the crop cannot be weeded, thinned, picked,sorted, transported or sold.

Lack of on-the-farm storage facilities greatly enhances opportunities for quality deterioration and actual loss from rodents, insects and moisture.

In this author's opinion, the ready availability of low-cost consumer items would greatly enhance a farmer's motivation to produce more. I have seen cases where large crops were left unharvested because the amount harvested was sufficient to meet a farmer's immediate family requirements. One farmer's success may not necessarily result in a neighbor wanting to keep up with the Joneses but only in frustration and jealousy. We should be able to motivate a severe case of the "wants" to increase the production of cash crops.

The marketing and distribution of food crops usually hangs in a delicate balance. An overabundance of a particular food in one area is frequently offset by a severe shortage in another area, not too distant. Marketing information should be available to level out peaks and valleys that occur in such a situation.

The shortage of well trained, highly motivated agricultural extension staff is apparent. It is not uncommon to see cotton seed planted in holes by the handful and then left unthinned until the damage has been done. Blanket recommendations concerning optimum planting dates, fertilizer application, etc. create a lot of ill will among farmers. Extension staff should be given the latitude to alter recommendations according to local conditions.

Generally speaking, cooperative societies are quite homogeneous groups. Occasions do occur where a society is split due to religious differences, tribalism or clanism to the detriment of its members, but these cases are quite few.

Dishonesty or corruption of society officials is common and the only solution is extremely close supervision by government staff. A combination of corrupt staff and society officials is usually short lived and is probably one of the reasons for lack

of staff continuity. If frequent transfers of staff are made, the chance of such collusion is minimized.

2. Role of Credit in Meeting These Problems:

Perhaps the best solution to leveling labor peaks is the introduction of ox cultivation. In areas that are still infested with tsetse fly, mechanical cultivation for hire may be the solution. All of these solutions require credit of intermediate nature which again strains meager financial resources.

To solve the on-the-farm storage problem, one immediately thinks of a massive financial input to build low-cost storage facilities. This solution may look good on paper, but the root of the problem is deeper. Education again is the key as it is unlikely that any short-term solution is feasible. Again, farmers must be motivated to want better storage facilities.

In Uganda, community development and health facilities are expanding. More and better coordination is required as the ultimate benefactor of all social, health, agricultural, cooperative and security services is the farmer.

The role of credit must in the future be expanded to include social lending purposes. At the present time, however, we may have to consider this as luxury lending. The ultimate goal of small farmer credit must be long term in nature. All effort should be expended toward financing social services, better living conditions and a stable population through increased farm income.

3. Credit and New Technology:

a. Triggering Small Farmer Development--It is extremely doubtful if a massive infusion of small farmer credit will motivate farmers to adopt improved technology unless it is accompanied by a similar input of extension and supervision. It is our experience that even purchased inputs will remain unused unless accompanied by demonstration and supervision. Farmer attitudes remain the stumbling block for which there seems to be no

short-term solution. The bulk of the farmers are hesitant to use purchased improved seeds while home harvested seeds are readily available.

It would appear that the solution to these problems lies in isolating credit for improved technology on a project-by-project, crop-by-crop, area-by-area basis. The shotgun approach toward extension should be narrowed to shoot at a particular target. An attempt should be made to narrow the approach to new technology and educate the farmer on practical terms. The glorious goals of reduction of foreign exchange losses, decreasing trade imbalances and national development are difficult if not impossible to explain to a peasant farmer. He must be personally motivated from a selfish standpoint to want change in order to improve his social and economic status.

b. Sustaining Small Farmer Development--Credit is an important factor in stimulating a farmer's propensity to purchase new technology inputs. Farmers are more willing to risk borrowed capital than their own limited resources on new technology. This is especially true with the large group of slow innovators.

The benefits accrued from subsidized inputs are doubtful. If the new innovation is profitable, the farmer should be able and willing to bear the cost of inputs. Government subsidies are frequently corrupted, bureaucratic, even politically inspired for personal gain or popularity.

Subsidies can be effective in cases where institutional credit is not available or in short supply. The fact remains, however, that even subsidized items are left unpurchased by the mass of peasant farmers unless credit is available to pay for the unsubsidized portion of the input.

4. Conditions for Success or Failure:

The success that has been achieved as far as loan repayments are concerned can be attributed to four main factors: (1) the marketing of cash crops is tied into the lending system; (2) the simple, workable rules by which the scheme operates have not been altered; (3) the record keeping is extremely simple; and (4) during the schemes infancy, key personnel vigorously pursued its objectives.

Greater success could have been achieved if the scheme had more autonomy that would have allowed specialization. A promotion policy within the credit section would substantially raise morale that seems to go up and down like a Yo-Yo.

Now that the initial education process has been completed, more concentration on technology is required. As long as administration of the scheme remains with the Cooperative Department and the Agricultural Credit Advisory Service remains in the Agricultural Department, petty jealousies, bureaucracy and lack of coordination are likely to hinder progress.

5. How Could the Program be Improved:

Perhaps the time is fast approaching when a complete reorganization of the staffing pattern is required. For greater continuity and to consolidate the supervisory and extension staff it may be necessary to put all the credit personnel under one umbrella. The natural vehicle for such a move would be the Uganda Cooperative Development Bank. Present Government Officers working on the scheme would have to be seconded to the bank but remain on Government's payroll. To meet the expanded challenge, the Cooperative Bank itself would have to undergo some changes to accommodate the reorganization. Their biggest problem would be lack of finance and indeed a small financial base on which to launch an expanded program.

One serious defect in the present scheme is the absence of an independent loans inspectorate. At the present time, primary society audit is carried out by the Cooperative Department. This annual audit is an exercise that only scratches the surface of the societies credit operations. Loans inspectors should have the authority to select random cases for complete audit with auxilliary power to trace loan funds to individual farmer level to insure the security of loan funds.

Administrative and supervisory costs on loans averaging about $30.00 are necessarily high. These costs will have to continue to be borne by government.

If the definition of concessional interest rates is anything below the cost of borrowing, administration and supervision, then it is necessary. On the other

hand, farmers should be able to pay a "realistic" rate that is geared to their income. In Uganda we tend to overlook the real cost of administration because it is considered to be part of a necessary governmental expenditure, not diverced from the normal supervisory and administrative duties, necessary for the development of agriculture and agricultural credit.

IV. ROLE OF TECHNICAL ASSISTANCE

A. AID Inputs - The substantial contributions are described in another volume.

B. Other donor inputs

Contributions by other donors have been negligible with the exceptions previously mentioned. The original responsibility for the implementation of the "Ryan Credit Scheme" was a British civil servant filling an OPEX position with the Uganda Government as Principal Cooperative Officer (Credit). His salary was being topped off by the British Overseas Development Ministry. This position was Ugandanized by a competant, trained officer in July 1968.

Financial contributions have been limited to specific purposes rather than in support of the entire program. The only example is that previously mentioned British Government loan of .17 million dollars to finance the import content of the tobacco expansion scheme in 1966.

Study tours of limited nature have been accepted for one person in Japan and 6 Ugandans in Finland.

C. Effects

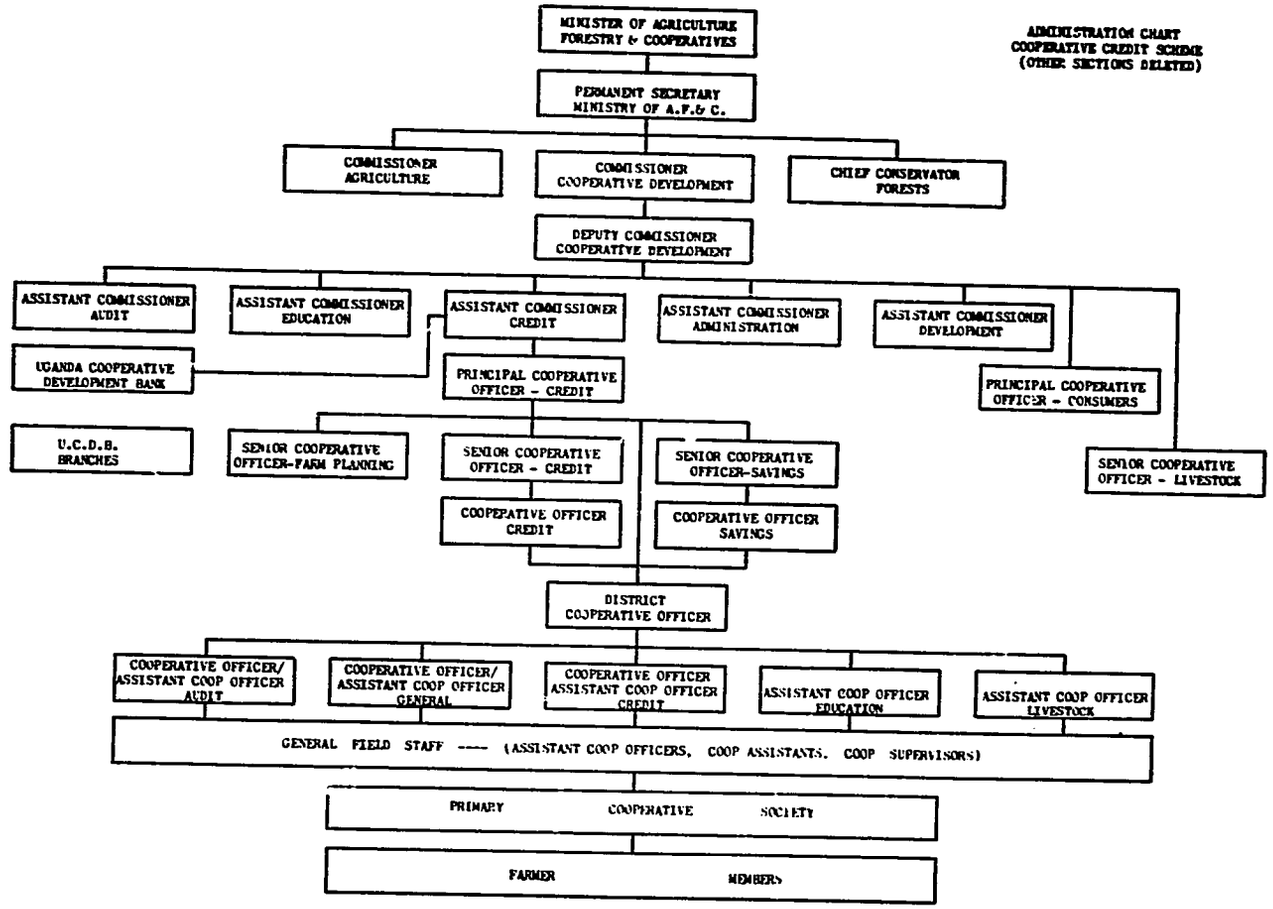
Monetary contributions have had no effect on the ordinary credit scheme. It is still considered that the effect of the original expatriate administrator has been everlasting.

D. Recommendations

Provided that already trained credit personnel are permitted to follow their speciality, in service training and in country courses of approximately 3 months duration should be sufficient to meet the demands for future personnel. It is the authors opinion that the Government of Uganda could still benefit from technical assistance in several fields. Rural savings, the Savings and Credit societies (Credit Unions) and the Cooperative Bank are in need of experienced technicians. In addition to these fields, some form of loans inspectorate which is independent from normal banking and civil service structures is essential to serve as a watch-dog on the Credit Scheme. Credit examinations at farmer and society levels could prevent a growing tendency of falsification of documents from becoming a hinderance to the issuance of sound loans.

APPENDIX I

ADMINISTRATION CHART
COOPERATIVE CREDIT SCHEME
(OTHER SECTIONS DELETED)



APPENDIX II

COOPERATIVE CREDIT SCHEME LOAN APPROVALS BY YEAR, NUMBER AND PURPOSE (DOLLARS)

Year	No.Of Society Loans	Total Borrowers	Cotton	Coffee	Tobacco	Controlled Produce	Livestock	Total
1962	98	7,948	115,350	12,714				128,064
1963	255	19,152	284,614	116,493				401,107
1964	284	25,914	662,017	125,429	6,429			793,875
1965	326	36,998	842,643	182,357	89,857	11,657		1,126,514
1966	303	33,963	934,200	169,286	7,143	20,157		1,130,786
1967	312	22,881*	601,114	125,714	404,266	28,321	2,143	1,161,558
1968	314	15,655*	454,693	113,357	724,371	73,436		1,365,857
1969	290	27,236	445,590	107,786	839,906	27,914	3,714	1,424,910
1970	403	29,957*	469,993	267,857	812,142	42,550	1,464	1,594,006
1971	512	50,000**	728,006	637,444	1,346,690	85,981	13,050	2,811,171
	3,097	269,704	5,538,220	1,858,437	4,230,804	290,016	20,371	11,937,848

* Not including flue cured tobacco

** Estimated

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DEFAULTED C.C.S. LOANS (EXCLUDING FLUE CURED TOBACCO) AS OF 31ST JULY 1972
BY DISTRICT AND YEAR (DOLLARS)

APPENDIX III

DISTRICT	1962/63	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	TOTALS
Masaka	-	-	1480	2477	2884	1093	-	-	1589		9523
Mubende	-	-	-	-	-	-	1193	-	91		1284
W. Buganda	-	-	-	-	-	-	-	-	-		-
E. Buganda	-	-	-	-	4858	668	387	-	-		5913
Busoga	-	-	-	4712	-	5126	-	-	-		9838
Bukedi	-	-	-	945	13090	-	4956	-	-		18991
Bugisu	-	-	-	-	-	-	-	-	-		-
Sebei	-	-	-	-	-	-	-	24	1068		1092
Teso	-	-	-	-	3941	-	-	15	2956		6912
Karamoja	-	-	-	-	-	-	-	-	-	DUE	-
E. Acholi	-	-	-	-	2649	-	698	197	1769		5313
W. Acholi	-	-	-	-	-	-	-	268	-	YET	268
Madi	-	-	-	-	-	-	-	-	-		-
West Nile	-	-	-	-	-	4249	-	639	1939	NOT	6827
Lango	-	-	-	-	15918	-	689	2489	13245		32341
Bunyoro	-	-	162	-	895	1853	672	482	1807		5871
Toro	-	-	-	97	-	-	-	1949	231		2277
Ankole	-	-	-	-	-	-	-	3325	-		3325
Kigezi	-	-	-	-	-	-	-	-	443		443
TOTALS			1642	8231	44235	12989	8595	9388	25138		110,218

FUND USAGE

1969

Purchase of Tools and Equipment	.5 %
Purchase of Livestock	.7 %
Purchase of Insecticides	3.5 %
Hire of Ploughs	6.6 %
Hire of Tractors	14.8 %
Purchase of Coffee Husk for Mulching and Labor for Mulching	25.1 %
Hire of Labor for Opening New Land	17.5 %
Hire of Labor for Weeding, etc.	29.6 %
Other	1.7 %

COUNTRY STUDY

THE ROLE OF MONEY IN THE DEVELOPMENT OF FARMING IN THE MUMBWA AND KATETE AREAS OF ZAMBIA

Excerpts
from a paper by
R.A.J. Roberts
University of Nottingham and the
Food and Agriculture Organization

Sutton Bonington
October, 1972

Note

The editor wishes to thank R.A.J. Roberts for his permission to use excerpts from his excellent dissertation. The latter was undertaken for reasons that had nothing to do with the Spring Review, but the coincidence of interests is remarkable.

The preliminary material has been reproduced in its entirety in this volume. Check marks opposite section headings in the table of contents which follows indicate the pieces from the body of the text that have also been reproduced.

Acknowledgements

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The role of money in the development of farming in the Mumbwa and Katete areas of Zambia

This study, which began in 1967, originated as a result of the fact that the use of credit-purchase of improved farm inputs, as a means of developing peasant farming, in Zambia, had met with very little success. Moreover, the literature indicated that other developing areas had had similar experience with credit schemes that were not part of a full 'package' development programme. Since manpower constraints were considered likely to limit greatly the extent to which 'package' development programmes could be implemented, in Zambia, over the next few years, the study has addressed itself chiefly to identifying the role which the peasant farmers' own monetary resources could play in financing farm development.

To this end, the thesis deals with:

(i) the use of money in peasant farming,

(ii) the effect of the nature of the source of cash income on the generation of cash savings,

(iii) the constraints which limit the extent to which peasants' cash savings can be invested in farming, and the possibility of reducing the effect of these constraints by introducing co-operative savings and credit societies, and

(iv) the role of institutional and commercial credit in the survey areas, with particular attention being paid to the efficacy of using credit-purchase as an incentive for peasant farmers to adopt farming innovations.

The results of the investigation indicate that, in the areas of Zambia studied, considerably more reliance could be placed upon local sources of finance (cultivators' cash savings) for peasant farm development than has been the case in the past. In addition, it is likely that the promotion of co-operative savings and credit societies would both improve the investment environment of peasant farming, by assisting in the commercialization of the cultivators' attitudes towards farming, and also increase the quantity of local funds available for investment.

The study is an extension of, and uses data collected by, the Universities of Nottingham and Zambia Agricultural Labour Productivity Investigation (UNZALPI).

R.A.J. Roberts

School of Agriculture,
University of Nottingham.

Chapter 1

Innovation and investment in village farming

(1) Introduction

1.1 Two apparently conflicting viewpoints exist concerning the African cultivator's monetary resources. Firstly there is the view of the agricultural extension officer charged with the task of developing local farming. Having set out his crop demonstration plots, incorporating the best knowledge from the research establishments, he views the progress of the crops, particularly the manner in which they contrast with those of neighbouring peasant cultivators, with considerable satisfaction. Then he ensures that the cultivators in his district see the demonstration plots and that supplies are available of the inputs necessary to implement the husbandry innovations. The result: few, if any, cultivators follow the good example and the agriculturalist concludes that peasant cultivators simply do not have the funds to invest in improved inputs. Secondly, we have the view of the banker, managing a bank in a rural area of a newly-independent African country at the time that a new currency is introduced to replace that of the colonial administration. In the normal course of events he has little contact with peasant farmers, and when the new money arrives he is amazed to find many villagers at the counter of his bank. They display every indication of extreme poverty except for the fact that they produce quite large sums of money for exchange. The banker, quite understandably, forms the

view that many villagers in his district hoard considerable quantities of cash. Being conscientious, both the agriculturalist and the banker wish to act on their observations. Accordingly, the former makes it possible for peasant farmers to purchase improved farm inputs on credit. Difficulties occur, reflected in low repayment rates and the agriculturalist struggles to overcome these by organizing more comprehensive supervision of all aspects of the credit programme. Meanwhile the banker tries to persuade the farmers to open deposit accounts, very largely fails in this and abandons the attempt. He is able to do this for, unlike the agriculturalist, his duties are not confined to dealing with difficult peasant farmers. These examples, compiled from the experiences of many such officers, oversimplify the situation, but they do serve to introduce the implications for rural development of the easily overlooked factor: money saved by peasants.

1.2 Exhortations by politicians to rural peoples to work harder and to produce more from the land are commonplace in Africa today. This concern on the part of those in authority is understandable. That a developing rural sector is important to national economic growth has been well documented (B.F. Johnston, 1970, pp.369-378). Not only is the rural sector a source of food and raw materials for urban areas, and a market for the products of urban industry, but the prosperity of the rural population is considered to be an important factor in alleviating such problems as excessive urban drift.

1.3 These tasks and problems are common to many African countries, but, in the case of Zambia[1], they are aggravated by special conditions: on the one hand, the Zambian urban population, and therefore the consumption of marketed maize, is expanding more rapidly than that in most countries, and, on the other, the ranks of the European maize producers[2] are steadily dwindling. These farmers have been responsible, in the past, for much of the nation's marketed food production (see Figure 1) - maize being the staple foodstuff of the urban areas. Although a high foreign exchange income from copper sales has meant that substantial funds have been available for food imports, these funds are not inexhaustible and many calls are made on them. Moreover, the landlocked position of Zambia, and the difficulties over the use of transport services to the ports of Beira, Lobito Bay and Dar-es-Salaam, have meant that imported maize is very expensive (see Table 1).

1.4 But high costs of imported maize, and the needs of the urban population, are not the only considerations causing the authorities to seek production increases from African producers. Development strategies are influenced by ideology, and decisions as to objectives are involved. In developing the rural areas, is the chief goal to maximise food production, to maximise equality between the rural and urban sectors (as far as this is possible) or to maximise equality within the rural

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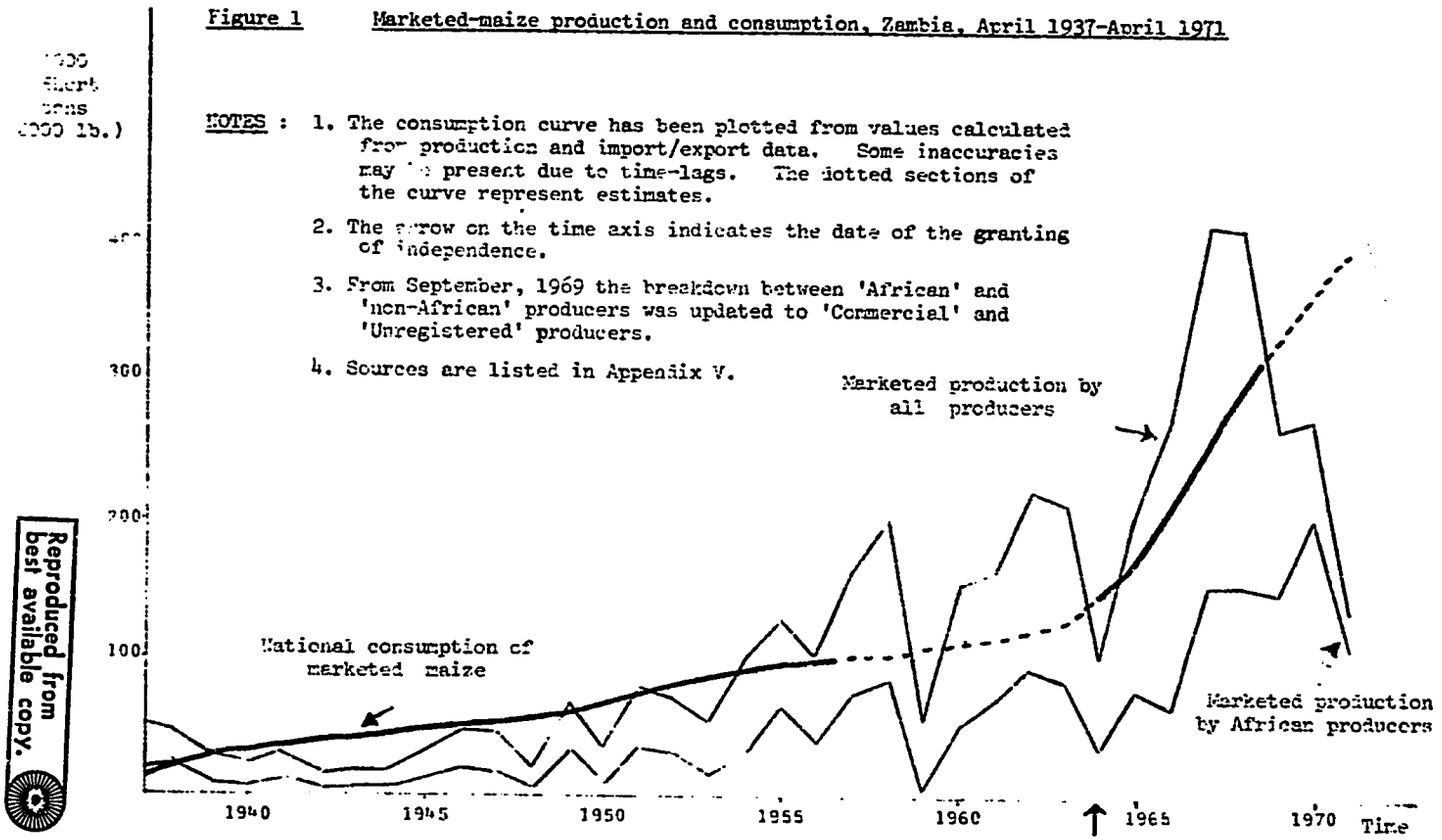
(1) This study is particularly concerned with Zambia. Prior to the granting of independence in 1964 this territory was known as Northern Rhodesia, but the term 'Zambia' will be used by the present author, irrespective of the time period involved, except where the context makes the use of another term desirable.

(2) For several decades European settlers have farmed in Zambia.

Figure 1 Marketed-maize production and consumption, Zambia, April 1937-April 1971



NOTES :

1. The consumption curve has been plotted from values calculated from production and import/export data. Some inaccuracies may be present due to time-lags. The dotted sections of the curve represent estimates.
2. The arrow on the time axis indicates the date of the granting of independence.
3. From September, 1969 the breakdown between 'African' and 'non-African' producers was updated to 'Commercial' and 'Unregistered' producers.
4. Sources are listed in Appendix V.

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Table 1

Maize prices: the cost argument for Zambia's self-sufficiency in maize

Source of maize and delivery point	Kwacha[1] per long ton (2240 lb.)
Approximate cost of imported maize, Lusaka, 1970	156[a]
Deliveries by local producers, Lusaka, 1970	45[b]
Argentine maize c.i.f. London, December 1970[2]	56[c]

Sources: a Estimate based on information from sources close to officials concerned. No official figure has been given by the Zambian Government.

b Ministry of Rural Development, Monthly Statistical Bulletin, March 1971, Lusaka, p.1. This price is for 'A grade' maize.

c FAO Monthly Bulletin of Agricultural Economics and Statistics, Rome, March 1971.

Notes: (1) One Kwacha (K) = 100 ngwee (n) = £Stg.0.58. Prior to January, 1968, when the decimal units Kwacha and ngwee were introduced, the Zambian currency was pounds, shillings and pence, the Zambian pound being equal to the pound sterling, before the latter was devalued by 14.3 per cent in 1963. One Kwacha was made equal to ten shillings in the former Zambian currency.

(2) The price of Argentine maize c.i.f. London is included for purposes of comparison only.

population? These aims are not entirely mutually exclusive, but they are sufficiently so to cause real differences in the strategy to be adopted for rural development. In recent years, broad administrative policy has been guided, at least in part, by "Zambian humanism"(3), the ideals of which contrast sharply with the conditions brought about by the strongly dualistic nature of the Zambian economy. The inequalities implicit in these conditions have been accentuated in the period since Independence by a big increase in government spending. The benefits of the resulting economic boom have accrued chiefly to the urban areas. Thus it is not surprising that the Government of President Kaunda, striving for both development and equality, has sought a means by which the necessary agricultural production increases would be achieved, while at the same time improving the lot of the village cultivator. This meant a rejection of the easy way out, which, in 1964, would have meant encouraging European farmers to stay in the country and to increase production. This could have been achieved at the time by allowing such farmers to remit part of their farming profits abroad. Instead the Government embarked on a policy aimed at increasing the agricultural productivity of African farmers. This involved sponsoring the use of improved farm production techniques by means of extension advice combined with a massive credit operation. It is still too early to make a fair appraisal of the long term

(3) "Zambian humanism" is the term commonly used to refer to the type of socialism advocated by the nation's leader, President Kaunda.

consequences of this policy, especially with regard to its broad educative effects which may be good: experience with using fertilizer, for example; or bad: the deleterious effect on national loan morality which some observers believe has been the result of the toleration of low loan repayment rates in recent years. But apart from this it is clear that the immediate results of the policy fell far short of expectations and of the national needs.

1.5 This study is concerned with some of the Zambian farm development problems which involve money. In view of the difficulties experienced with credit in Zambia it seeks to define the role of local funds (cultivators' cash savings) in the process of increasing the use of farming innovations.

Chapter 5

An agricultural development policy - some hypotheses

(1) Theoretical basis for the study

5.1 The argument, from the evidence presented in the preceding chapters, may be summarized as follows:

(i) The development of farming necessitates the adoption, by cultivators, of improved farm inputs and practices. These are usually termed 'innovations', since they do not form part of the normal or traditional cultivation pattern.

(ii) The introduction of these may be constrained by anti-innovation factors, these being distinct from factors directly affecting the investment of money in farming innovations.

(iii) Most innovation involves the use of purchased inputs, that is, goods or services which the cultivator cannot provide directly by his own labour and which must, therefore, be bought.

(iv) The quantity of funds existing, risk factors and, in some cases, social factors, all serve to limit the amount of money, which is available for farm investment, from any given source. Investment funds which are external to the local community may be provided by the state, by international organizations, by commercial banks and by commercial firms. Those investment funds which are derived from the cash savings of cultivators

may be utilised directly by the owners of the funds, or they may be used by cultivators other than the owners. The latter method may be by means of private borrowing or through the agency of a savings and credit society.

(v) The evidence available strongly indicates that peasant cultivators in many developing countries have cash savings which, in some cases, are considerable. Although in a few areas, for example in Ghana, these have been of importance, in past years, in the commercialization of farming, their relevance is currently overlooked to a large extent. This neglect is probably due on the one hand to ignorance of the existence of such funds, and on the other to a belief that, even if the funds do exist, the social constraints to their mobilization are such that they cannot be considered as being a likely source of finance for farm development.

5.2 Certain conclusions can be drawn from the evidence given above. Firstly, the constraints to innovation itself are not of the type that would be overcome by providing the cultivator with funds, for shortage of money is not an immediate constraint. Clearly what is needed here is an educative process, with regard both to the potential commercial nature of farming and to the profitability of innovation. Increasing the use of farming innovations in a given community is a two-stage process:

(i) initiating the use of new inputs, and

(ii) extending the use of these once the usually difficult

initiation stage has been completed.

Secondly, institutions handling funds external to those of the local community are limited in the extent to which they can issue credit to peasant cultivators. This limitation is due to factors arising from the smallness of the scale and the non-commercial nature of such cultivators' operations. As a result, Vasthoff's notion of restricting such credit to introducing peasant cultivators to the use of improved inputs is difficult to justify. A possible exception to this is the use of loans in package-type schemes, where credit is simply one of the many factors involved in the programme. However, as noted above, Penny maintains that such schemes are subject to the criticism he makes of all programmes for providing small-scale cultivators with credit, namely, that these cultivators' commercial attitudes are not such as to make them satisfactory borrowers and users of the funds of others. Quite apart from their suitability or otherwise in this respect, package schemes employ resources of a type, and on a scale, more suited to an already developed than to a developing economy. Hence their usefulness in countries such as Zambia is limited. Thirdly, much post-war development planning appears to have overlooked the potential of using local funds - peasant cultivators' cash savings - in the process of developing farming at this level.

5.3 It is hypothesized that the various money-linked constraints, both to innovation itself and to investment in improved inputs, may be overcome by an agricultural development policy which, when

a package approach is not possible[1]

(i) relies on local funds to provide the finance necessary for the purchase of improved farm inputs, in the early stages of development, and

(ii) restricts the use of external, institutional credit to extending rather than initiating the use of improved inputs on any given farm.

The implications of this policy are given in greater detail in paragraphs 5.4 and 5.5 below, whilst the feasibility and extent to which it could be implemented in two areas of Zambia are examined in the rest of the study. Data collected in Mumbwa and Katete provide information for the main study, whilst an ancillary investigation is made of a group of cultivators in the Southern Province of Zambia. These cultivators are of interest because they have formed co-operative credit and savings societies.

3.4 Local funds may become available to a cultivator for farm investment purposes by any of three methods:

(i) by direct use of his own funds,

(ii) by direct borrowing from a neighbour,

(iii) by obtaining a loan from a pool of local savings - a savings and credit society or credit union.

In any given village community some cultivators are likely to be prepared to introduce and make use of innovations sooner than

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(1) It was not possible to examine a package-approach scheme in Zambia. Consequently, no attempt is made in the following analysis to compare package development policy with that proposed in this study. The latter is presented as a supplement to the currently popular package-approach policy since the implementation of package schemes is limited by the heavy demands they make on resources from outside the local community.

are others. Indeed, observation indicates that a period of several years may elapse before many will accept innovations, and some cultivators may never do so. Thus only part of the village community may be expected to invest money in farming, whatever the source of that money. This being so, that fraction of total local funds which is available for investment may be increased by the investing cultivators making use of the funds of their less progressive village colleagues, in addition to using their own funds. Direct (person-to-person) borrowing is not a new practice in most communities and consequently, in some areas, certain limits are likely to have developed regarding the purposes for which money can be borrowed. Where this is so, and these limits reduce the use of privately-borrowed funds for farm investment, then the capacity of a local credit union to perform the function of mobilizing local savings for farm investment would be worth exploring. Being itself an innovation, and a means of formalizing the borrowing function, a credit union may be expected not to suffer from traditional private-lending constraints. Moreover, if a deposit in a credit union can fulfil, partially at least, the immediate purposes for cash saving (as would be the case when money is saved for the purposes of deferred investment or consumption, for status purposes and as an insurance against unforeseen contingencies - credit union deposits are normally withdrawable), then this will itself increase the proportion of local funds available for lending by the credit union to innovating cultivators[2].

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[2] No 'extending only' limitation (as described in paragraph 5.3) is proposed for local, credit-union lending to farmers. The reasons for such a limitation being suggested for institutions handling external funds do not apply to local credit union-type societies.

The use of local, as opposed to external, funds may also be expected to facilitate the assimilation of a commercial attitude towards farming, thus overcoming one of the chief constraints to innovation in farming, the non-commercial attitude - as described and discussed in section (3) of Chapter 2.

5.5 Under the policy advocated, where, by definition, the intensive training and advisory services provided in a package-approach scheme are not available, new farming techniques must appear to the individual cultivator to be sufficiently profitable and feasible so as initially to commend themselves to his use. As noted earlier, an interesting and successful example of the operation of this principle has been the Food and Agriculture Organization/Freedom from Hunger Campaign fertilizer programme in Ethiopia. Yield-increasing innovations, such as fertilizer, may be thought to be more suited to this policy than mechanical innovations since, unlike the latter, the former are highly divisible, neutral to scale and fit easily into existing systems of small-holder agriculture. Yet ownership of the means of mechanization, despite the 'lumpy' nature of the inputs involved, still has a place in such a policy and must be regarded as a supplement, rather than as an alternative, to the use of yield-increasing innovations. For even if the latter were sufficient in themselves to bring about the required production increases, their use alone would not satisfy the ambitions of young cultivators. The possibility of mechanizing certain farm operations is a major reason for the latter continuing to live and work in rural areas. With trek oxen, tractors and implements,

the condition of using external credit to 'extend' rather than to 'initiate' would be fulfilled by the cultivator-purchaser providing a substantial deposit[3]. In these circumstances, the availability of the balance on credit (this balance being small in relation to the size of the deposit) is not primarily an initiating or persuading factor. It is properly classed as extending, since it enables a man, who is already convinced of the productivity and profitability of the innovation, to purchase and make use of it sooner than would have been the case had not some credit been available.

5.6 An examination of the hypotheses presented in paragraph 5.3, and on which the proposed policy depends, involves a study of the following:

(i) the current role of purchased inputs in peasant farming,

(ii) the amount of money in rural areas, that is, the cash resources of the cultivators, together with the factors influencing the generation of cash savings,

(iii) the extent to and means by which these funds are currently invested in farming innovations,

(iv) the potential for increasing the proportion of local funds available for farm investment by reducing the constraining effect of the motives for accumulating and holding money; for example, by promoting local savings and credit societies, and

(v) the role of external (institutional and commercial)

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[3] Such a system is already in operation in Zambia. The two major suppliers of tractors to African cultivators, from 1969, have required a deposit of approximately 70 per cent of the cash price on all credit-sales of machinery.

credit in farm production and as an incentive to innovation.

These items, in respect of the Mumbwa and Katete areas of Zambia, are examined in Chapters 6 to 9, and the findings are summarized in Chapter 10. The following section of this chapter describes the collection of the data used in the main study, together with a brief account of the two areas in which the fieldwork was carried out.

(2) Data collection and the survey areas

5.7 The present study was an adjunct to the Universities of Nottingham and Zambia Agricultural Labour Productivity Investigation (UNZALPI). The UNZALPI survey provided most of the data for this study, and gave the writer an opportunity for personal observation, over a period of nearly three years, of the money-handling and farming practices of the cultivators in the two survey areas, Mumbwa and Katete. A total of 239 cultivators were involved in the UNZALPI survey, and of these, 135 were situated in the Mumbwa area and 104 in Katete. The sampling was by village. In Mumbwa a purposive sample was selected, whilst in the more uniform Katete area a random procedure was used. Survey respondents were visited daily by enumerators for a three-year period, and activity (labour) data and information concerning transactions relating to the previous day were collected and recorded. Note was taken, each year, of the sample cultivators' farming practices, and of their belongings, both farm and non-farm. In addition, data of a biographical nature were collected, together with some material which indicated

the cultivators' attitudes to certain facets of development. The first year (1966/67) was regarded as a pilot year, during which time the field personnel gained experience, and improved both the scope and the accuracy of the information being collected[4]. Data used in the analysis relate to the two-year period, November 1967 to October 1969.

5.8 One feature of the data-collection procedures used was a system by which the data collected by enumerators in daily interviews was checked by a second enumerator, who used personal observation and informal 'non-official' conversations in order to collect information. Naturally, the latter method was very time-consuming and only a proportion of the data collected by the 'official' enumerator could be checked in this way[5]. However, by providing a greater amount of information about the sample cultivators, the procedure enabled the accuracy of the data to be improved considerably.

5.9 Mumbwa District lies to the west of Lusaka and the district centre, Mumbwa township, is 104 miles from the Zambian capital. The Katete area of Chipata District is in the eastern part of the country, with the township of Katete being 320 miles from

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(4) A more detailed account of the sampling system used, of the data collected and of data-collection procedures is given in Bessell, J.E., Roberts, R.A.J. and Vanzetti, N.R., 1968.

(5) Only the 'official' enumerator was known as such by the co-operators in the survey. The 'unofficial' or checking enumerator, although known generally as an employee of the survey, was not believed by the co-operators in his 'checking' village to be collecting data, whilst he was in the village concerned. He did not carry the normal survey recording papers and, being a local man, his visits were thought to be off-duty social calls.

Lusaka[6]. Both areas are on main roads, have primary schools, a secondary school, a hospital, shopping areas, and agricultural supply and marketing facilities. The natural environment for farming is similar in the two areas. Good soil is relatively plentiful, and both the amount and the distribution of rainfall generally provide suitable conditions for the growing of crops such as maize, groundnuts, sorghum, millets [7], cotton, tobacco and vegetables. The chief livestock types kept include cattle, poultry, goats and, in Katete, pigs. Parts of both survey areas are affected by the disease trypanosomiasis, spread by the tsetse fly. Cattle-keeping within such areas is hazardous and certain precautions need to be taken in the areas adjacent to the tsetse-fly zones.

5.10 Mumbwa District had a population of approximately 60 000 in September 1969[8]. Of these, approximately 20 per cent were estimated to be of Rhodesian origin, chiefly of the Shona tribal group. Many other tribes are represented in the district, among them the Kaonde, the Ila and the Lenje. Tribal differences are strong. Katete forms part of Chipata District and at the 1969 census this district was recorded as having a population of 261000. The composition of the population by tribe in the

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(6) Further descriptive material concerning the Mumbwa and Katete areas is given in Bessell *et al*, 1968, pp.14-21.

(7) The millets grown are, finger millet (*Eleusine coracana*) and bulrush millet (*Pennisetum typhoides*). Great millet (*Sorghum* spp.), also known as 'Guinea corn' and 'Kaffir corn', is referred to in this work as 'sorghum'.

(8) Central Statistical Office, Zambia, (1970), *Census of population and housing, 1969*, Lusaka, Govt. Printer, p.A6.

Katete area is much more uniform than that in Mumbwa. Members of the Chewa tribe form the bulk of the population, with other, minor groups being strongly influenced in most matters by the conventions and attitudes associated with this tribe. Many of the cultivators, in both areas, merely farm because this is part of the life of a person living in a village. These people are termed 'villagers'. Others farm in order to earn a cash income and are termed 'farmers'. This distinction, which was mentioned on page 18, is used on many occasions in this work, and is discussed in greater detail in Chapter 6.

(6) Formal lending arrangements involving local funds[30]

8.36 In Chapter 4 an account was given of the manner in which co-operative savings and credit societies, by providing a simplified banking service to members, might increase the quantity of local funds available for investment in farming. Although no such societies existed in the two survey areas during the data-collection period, two co-operative credit and savings societies, which operated near Monze in the Southern Province of Zambia, provided an opportunity to study some of the effects of introducing this type of organization into a rural area. As the societies were still relatively new, the extent to which their effect on the development of farming could be assessed was extremely limited. Nevertheless, the financial information obtained provides a useful guide to the effects of providing local facilities for formal borrowing and lending. The farming in the Monze district bears many similarities to that in the areas studied in the main survey, particularly to that in Mumbwa[31]. One important difference is that the cultivators in Monze tended to be more ready to use fertilizer and hybrid seed in maize production than did the cultivators in the two main study areas. Another difference is that cattle-ownership is much more widespread in Monze than in either Mumbwa

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(30) The term 'formal' is used to indicate that the lending arrangements are made using a definite procedure and operating within a framework of regulations.

(31) The mean values of the sales of farm products in Monze and Mumbwa - K 151 and K 163 respectively for the 1968/69 farming year - were very similar. Maize is the chief cash crop in both areas.

or Katete. Both the Monze co-operative savings and credit societies studied were of the Raiffeisen or credit union type, and will be referred to as Society 1 and Society 2.

8.37 Evidence was given earlier in the chapter concerning the fairly substantial cash savings held by cultivators in Mumbwa and Katete. In the previous section, the private loan arrangements of these cultivators were examined. The total amount lent by the Mumbwa survey co-operators during November (the peak month for farm investment expenditure) was K 1767. At the same time, the value of the cash savings of the Mumbwa cultivators, as admitted at interviews held in the preceding month, totalled K 19926. Comparable figures for the Katete sample cultivators show that the total amount lent was K 262, whilst the cash savings amounted to K 4139. The immediate impression is that much scope exists, within both rural communities, for increasing the amount of money, for farm investment purposes, at the disposal of the more able cultivators. The formalizing of loan arrangements, as effected by a co-operative savings and credit society, might be expected to facilitate the transfer of funds that such an increase would imply.

8.38 The mobilization of local savings for farm investment is hindered by the fact that cultivators keep these funds for specific purposes. In Chapter 4 a logical basis was outlined for the means by which co-operative credit and savings societies might be expected to increase the proportion of cultivators' cash savings available for farm or other investment purposes. These

co-operative societies, at least from a theoretical point of view, were seen as being able to fulfil all the cultivators' reasons for accumulating funds - the motives of transaction, speculation, status and precaution - whilst at the same time making a proportion of the deposited savings available for cash-investment in farming. An examination is now made of the extent to which the two Southern Province credit unions have been successful in:

(i) attracting cash deposits from members, and

(ii) investing these funds in farming, by making loans to members for agricultural purposes.

8.39 The degree of success which the societies have achieved with regard to attracting members' cash savings cannot be gauged precisely. To do so would necessitate the possession of accurate information concerning the amounts of money cultivators keep at all possible repositories. In the case of the members of Society 2, no record was available of funds apart from those deposited at the credit union. A similar situation pertains for Society 1 as a whole; however, a sub-group of this society was interviewed and data collected concerning funds owned which were not deposited with the society[32]. The funds in question were of two types:

(i) those deposited with commercial banks and the Post Office Savings Bank, and

(ii) those kept at home.

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[32] See the first footnote to Table 49 for information concerning the selection of this sub-group.

It was not possible, in either case, to check the information given by sub-group respondents, though it is believed that the savings held at home have been greatly under-valued[33]. The data obtained from the sub-group, together with the aggregate credit union deposits of Societies 1 and 2 respectively, are given in Table 49. If the division of cash savings as practised by the sub-group of Society 1, despite its shortcomings, is taken as providing an indication of the extent to which a newly-formed credit union can mobilize the cash savings of its members, then the results show that 41 per cent of the money not already held in a financial institution was deposited with the credit union. Because of the strong likelihood that savings kept at home have been under-valued, this percentage figure probably gives an over-optimistic view of the effectiveness of the credit union in this respect. Nevertheless, given the fact that, at the time the data were collected, the society had only been operating for two years, the total amount deposited is impressive.

8.40 The geographical area covered by Society 1 adjoins the town of Monze. This town has two commercial-bank branches, as well as a branch of the Post Office Savings Bank. It is possible that the proximity of these institutions has encouraged members of this society to use the facilities they provide. Society 2 members lived in an area which was several miles from Monze and although, as mentioned above, no information concerning Society 2

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[33] These data were collected by a catechist (a lay parish-assistant) who knew most of the respondents well, since they formed part of the church congregation to which he was attached. It was this man's opinion that many people questioned were reluctant to state the full value of the money which they kept hidden at home.

Table 49

Cash savings of members of two Southern Province savings and credit societies, November 1969

	Number of members involved	Total 'deposits'	Mean sum per 'depositor'
		Kwacha	
Society 1 (Sub-group) [1] Credit union shares	101	1434	13.4
Bank and Post Office Savings Bank deposits	11	1370	124.5
Other (hidden) money	57	2054	36.0
Society 1 Credit union shares	185	2286	12.4
Society 2 [2] Credit union shares	170	5505	32.4

[1] These data relate to a sub-group of the society. The society had a total membership of 185. Those members not included in the table could not be contacted at the time information was being collected. Therefore, the sub-group cannot be regarded as a random sample of the whole membership. Nevertheless, the division of the cash savings of the sub-group cultivators between the three types of repository possible for such savings gives some indication of the degree to which the credit union has attracted the cash savings of its members. The mean value for the credit union deposits and shares held by members in the sub-group, at K 13.4, is very close to that of the membership as a whole, namely K 12.4.

[2] No information was available concerning the cash savings banked or hidden by members of this society.

members' dealings with savings institutions other than the credit union itself were available, it is unlikely that these cultivators used banking facilities to any great extent. This may help to explain the fact that Society 2 members, on average, have much larger credit union deposits than do the members of Society 1, but no definite statement can be made on this point.

8.41 The extent to which the two societies have succeeded in channelling local funds into investment connected with members' farming is indicated in Table 50. Society 2 has clearly been able to do more in this respect than has Society 1, but, even in the case of Society 2, only 19.8 per cent of members' savings have been invested in farming. Of the K 1092 involved in these loans, K 656, or 60 per cent, was accounted for by loans for the purchase of fertilizer, seed and insecticide. The balance was lent for the purchase of fencing materials, feed for cattle, poultry and pigs, for implements and for the payment of hire charges for a tractor. Clearly, both societies studied had done little to bring about investment of members' savings, in farming, at the time data were collected. However, preparations were being made to increase the level of farming loans; certainly no particular difficulty had been experienced with those issued by the societies up to that time. The very low level of farm investment of the funds at the disposal of Society 1 is due basically to the fact that officials of this society, rather than using society funds for farm investment, negotiated on members' behalf for farming loans from the Credit Organization of Zambia.

Table 50

The extent to which the two Southern Province credit unions have channelled deposits into investment on members' farms, 1969

	Society 1		Society 2	
	n[1]	Aggregate amount (Kwacha)	n[1]	Aggregate amount (Kwacha)
Total deposits and shares	185	2286	170	5505
Farming loans	1	24	27	1092
Loans for non-farming productive purposes	2	120	8	1616
Loans for provident purposes [2]	25	798	1	46
All loans	28	942	36	2754
Percentage of savings channelled into productive investment	-	6.3	-	49.2
Percentage of savings channelled into farm investment	-	1.0	-	19.8

[1] n = number of members involved

[2] Expenditure in this category includes that for the purchase of consumer goods, and for the payment of school fees and court fines.

8.42 The essential feature of a credit union, like that of other savings and credit societies, is that it gathers members' savings into a 'pool' from which loans are made. However, it is by no means unusual for use to be made of the structure, facilities and trained officials of a credit union to facilitate the investment of funds other than those of society members. Frequently, use is made of 'outside' funds in this way when the opportunities for making productive loans to members far exceed the value of the funds immediately available to the society. In addition, when funds from other sources are used, the society normally has the status of borrower. In both these respects Society 1 is unusual. Table 50 shows that only K 942, or 41 per cent of the funds available, had been lent. Also, the society did not act as a guarantor of the Credit Organization of Zambia loans: it merely negotiated them. Nevertheless, the experience of Society 1 in handling 'outside' funds for the benefit of members provides a useful indication of what can be done by credit unions in this respect. This aspect of credit union activity is examined in the following paragraph.

8.43 During the 1968/69 farming year, Society 1 officials negotiated, on behalf of 33 of their members, with the Credit Organization of Zambia for farming loans to a total value of K 3540. The division of this total amount for farming loans is given in Table 51. Loans for the seasonal inputs, fertilizer, seed, insecticide and tractor hire, formed the chief type of loan negotiated, amounting to K 2668, or 75 per cent of the total. This type of loan is repaid within one year of receipt. The

Table 51

Credit Organization of Zambia loans negotiated by Society 1 officials on behalf of members of that society, 1968/69

	Number of members involved	Aggregate amount in Kwacha
Fertilizer, seed, insecticide	33	2560
Fencing materials	24	812
Tractor hire	4	108
Implements	3	60
All farming loans	33	3540

balance of the credit was medium-term in nature, with a two to three year repayment period. The value of Credit Organization of Zambia funds used by society members was considerably in excess of the total funds at the immediate disposal of the society, and, since the value of maize marketed in 1968/69 by the borrowers was K 5274 and the loan repayment rate was 69 per cent, it is clear that the structure of this particular credit union provided a relatively satisfactory vehicle for the short-term investment of outside funds in members' farming enterprises[34].

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[34] In the same year the national loan repayment rate for this type of COZ farming loan was about 12 per cent.

Chapter 9

The role of institutional and commercial credit in farm improvement

(1) Introduction

9.1 An account was given in Chapter 3 of the use of commercial and institutional farm credit in Zambia in the years following Independence. Much of the credit activity at this time constituted part of a government-inspired effort to develop African farming quickly and so bring about the desired production increases from this sector. Some increase in production did occur, but the development which brought it about was not soundly based, and the cost to the Credit Organization of Zambia in terms of loans not repaid was very high. The operations of this Organization extended to most areas of the country, including the Mumbwa and Katete areas. A total of 50 cultivators in the sample were recorded as having received loans from this body, or from commercial credit sources, during the period for which credit data were recorded[1]. In addition, 25 cultivators were recorded as having unsuccessfully applied for credit during this period. Although the number of borrowers from commercial and institutional credit sources form only a small proportion of the total sample of 239 cultivators, the fact that a great deal was known about the 50 borrowers concerned

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[1] This time period is 1964/69 for Mumbwa cultivators and 1965/69 for those in Katete, except in the case of tobacco-production and cotton-production package loans. Data were only available for these loan types for the 1967/68 and 1968/69 seasons.

enabled a more penetrating study to be made of their participation in commercial and institutional credit arrangements than is usually possible. The commercial sources of credit were, chiefly, firms retailing machinery. In addition, one bank loan was granted. Section (2) of this chapter provides a brief description of the recent credit transactions of the survey co-operators. Since the failure of the Credit Organization was due, largely, to its very poor repayment record, particular attention is given to the repayment of loans by Mumbwa and Katete cultivators.

9.2 The Zambian Extension Service has been much concerned in recent years with persuading cultivators to use new techniques and inputs. A major incentive for cultivators to do so has been the promise that the monetary costs involved would be met by loans from the Credit Organization of Zambia. Thus credit has been used as a bait to help introduce the use of innovations. One of the hypotheses stated in Chapter 5 was that credit is an inappropriate means of initiating the use of innovative techniques in peasant farming, unless such credit, and the initial use of these techniques, forms part of a package development scheme. This hypothesis is examined in sections (3) and (4) of this chapter. Two approaches are used. In the first, an examination is made of the effectiveness of soft credit[2] in persuading cultivators to adopt innovations as part of their

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[2] The term 'soft credit' is used to describe the type of credit issued by the Credit Organization of Zambia. Many borrowers from this loan source knew that the repayment of loans would not necessarily be enforced.

regular farming programme. A small, experimental credit scheme formed the basis of the second approach. This approach was to investigate the feasibility of using tightly-controlled credit to assist in the introduction of hybrid maize seed and fertilizer to cultivators who had not hitherto used these inputs. Section (5) discusses the future role of credit in the development of farming in the Mumbwa and Katete areas of Zambia, in the light of the past credit experience of survey co-operators in these districts.

9.3 Both the Credit Organization of Zambia and commercial firms, having suffered substantial losses during the 1964 to 1967 period, drastically curbed their credit operations in the subsequent two seasons. Consequently very little institutional and commercial credit activity took place during the main data-collection period of the survey. However, it was possible to obtain information concerning the dealings which Mumbwa cultivators had had with sources of credit over the five-year period ending October 1969. For Katete, such information covered the four years prior to this date. The information obtained, from both areas, included repayment results, but no data concerning other factors of production used in farming, or production levels achieved, were available. It has not, therefore, been possible to use both loan productivities and loan repayment rates as measures of the success of individual farm credit arrangements. Consequently, the loan repayment record alone has had to be used for this purpose[3].

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[3] Under conditions where credit administration is poor, there is not necessarily a strong association between loan productivity and loan repayment. Both of these factors are important in judging the success of an individual loan. Consequently, the use of the loan repayment record alone for this purpose is not altogether satisfactory.

(2) The institutional and commercial credit dealings of Mumbwa and Katete survey co-operators[4]

9.4 Three types of lending agency were involved in credit operations in Mumbwa during the period for which credit data were collected, whilst only one such agency operated in Katete. The extent of the operations of these credit agencies is illustrated in Table 52, where the repayment record is also given for each loan source. As mentioned earlier, the loans made by commercial firms were concerned with machinery sales. The solitary bank loan was made to a cultivator who wished to extend his existing irrigation system, and the credit was used to purchase pipes and sprinklers. The Credit Organization of Zambia, which made loans for a wide variety of inputs, has clearly been the largest supplier of credit, both with regard to the number of cultivators involved, and the total amount borrowed. Because commercial-firm lending was exclusively for the purchase of tractors and engine-powered machinery, the very much greater repayment rate achieved by these firms cannot, without further scrutiny, be regarded as being necessarily caused by superior credit administration on the part of these firms. This is because the nature of the items purchased on credit may be a contributing factor to the high repayment rate. This possibility is now investigated.

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[4] Some of the data and analysis results presented in this section were prepared by the present author and published in an UNZALPI report, Elliott *et al*, 1970, pp.83-94.

Table 52

Credit sources, the sums borrowed and repaid, Mumbwa and Katete sample cultivators[1]

Lending agency	Number of cultivators	A Total borrowed[3]	B Amount due for repayment at 31.10.69[3]	C Repaid to this date	C/B %
		Aggregate values in Kwacha			
COZ[2]	45	15099	11079	2647	23.9
Commercial firm	8	5650	5350	4490	83.9
Bank	1	600	200	0	0

1 The time period covered is 1964/69 for Mumbwa and 1965/69 for Katete, except in the case of tobacco and cotton package loans. Data were only available for these loan types for the 1967/68 and 1968/69 seasons.

2 COZ = Credit Organization of Zambia

3 These amounts include interest charges up to 31.10.69.

9.5 In Table 53 the financial details are given for loans, by loan type, received by cultivators from all the sources noted in Table 52. The number of cultivators involved is given in Table 54. Of the total of K 11124 received by cultivators for the purchase of tractors and engine-powered machinery (loan types 1 and 8 in Table 53), K 5650 was accounted for by commercial firms. But whereas K 4490 of the K 5350 owed to these firms was repaid, only K 1240 of the K 4674 owed to the Credit Organization of Zambia for this type of loan had been repaid by the end of October, 1969. This clearly indicates that the administrative procedures followed by the commercial firms concerned were rather more successful than those of the Credit Organization of Zambia, and that, in these cases, it was the loan agency rather than the loan type which was the crucial factor in the achievement of high repayment levels. However, this type of loan is rather different from many of the other loan types for which data are given in Table 53. Tractors and machinery are moveable, durable and readily identifiable. These characteristics make it possible for the suppliers of credit for the purchase of these items to use repossession as a threat to enforce repayment, and, in the contemporary political climate in the Mumbwa area[5] where all the credit for loan types 1 and 8 was given, it was rather easier for a commercial firm to use repossession tactics than it was for the Credit Organization of Zambia to do so. It is likely that it

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[5] The Mumbwa district was one of the strongholds of the African National Congress, the political party which, since Independence in 1964, has been in opposition to President Kaunda's ruling United National Independence Party. The Credit Organization of Zambia was controlled partly by the officials of this latter party, at least at the district level. These local officials tended to use the Credit Organization as a means to popularity in what was basically, for them, a hostile area.

Table 53

Financial details[1] of loans from all sources, by type, Mumbwa and Katete cultivators[2]

Loan type	Applied for by cultivators	Approved by credit agency	Received by cultivators[3]	Due at[3] 31.10.69	Repaid at 31.10.69	% repaid of that due at 31.10.69
	Aggregate values in Kwacha					
1.Tractors and tractor implements	19041	10531	10324	8564	4930	57.6
2.Cattle	6824	4424	2250	1904	20	1.1
3.Egg prodn. units	6024	5024	2424	30	30	100.0
4.Fertiliz.	2850	2339	2024	1904	231	12.1
5.Ox implements	2291	1694	1166	1146	97	8.5
6.Motive power hire	1525	1233	540	500	121	24.2
7.Stumping	1322	772	684	644	23	3.6
8.Grinding mills	800	800	800	800	800	100.0
9.Tobacco package	797	797	797	797	770	96.6
10.Seed	753	301	267	267	45	16.9
11.Cotton package	73	73	73	73	70	95.9
All types of loan	42300	27988	21349	16629	7137	42.9

1 The frequencies associated with these amounts are given in Table 54.

2 The time period covered is 1964/69 for Mumbwa and 1965/69 for Katete, except in the case of tobacco and cotton package loans for which data were only available for 1967/69.

3 These amounts include interest charges up to 31.10.69.

Table 54

Number of cultivators involved in loans and loan applications from all sources, Mumbwa and Katete cultivators[1]

Loan type	Applied for by cultivators	Approved by credit agency	Received by cultivators	Due at 31.10.69	Repaid at 31.10.69
	Number of cultivators in each loan type				
1.Tractors and tractor implements	11	9	9	9	8
2.Cattle	37	25	17	17	3
3.Egg prodn. units	9	8	6	1	1
4.Fertilizer	31	19	14	14	4
5.Ox implements	27	20	15	15	4
6.Motive power hire	32	26	17	17	4
7.Stumping	10	7	6	6	1
8.Grinding mills	2	2	2	2	2
9.Tobacco package	6	6	6	6	6
10.Seed	15	10	8	8	3
11.Cotton package	5	5	5	5	5
All types of loan[2]	75	53	50	48	29

1 This table gives the frequencies for Table 53.

2 These figures indicate that many cultivators received loans from more than one category. Some cultivators also received loans from more than one of the sources given in Table 52. For this reason the frequencies given in Table 52 cannot be directly compared with those given in Table 54.

was the repossession policy of commercial firms which resulted in their high (87.7 per cent) repayment rate. Some justification for this view comes from the experience of the Credit Organization of Zambia, in Mumbwa, in October 1969. At this time the Credit Organization decided that repossession would, after all, be an appropriate policy to adopt. Accordingly, in an area where, of the K 7523 owed by survey co-operators, only K 224 had been hitherto forthcoming, a further K 1250 was collected in a very short time, as a result of threats to repossess machinery. Clearly part, at least, of the comparative success of the loan administration of the commercial firms was due to their stricter policy on loan repayment.

9.6 In Table 55 the effect of the nature of the loan agency on repayment rates has been removed by restricting the data to those loans given by the Credit Organization of Zambia. These loans have been placed into three groups: production-orientated package loans, non-package production-orientated loans, and those loans which are taken, by cultivators, primarily for reasons of status or for saving labour. The table indicates that the package loans achieved very satisfactory repayment results, with those loans not specifically orientated towards production - that is, the loans for cattle purchase and the hire of motive power - exhibiting a repayment rate of only 5.9 per cent. As argued in Chapter 3, package-type loans are likely to have limited application in Zambia during the next few years, owing to shortages of the technically-trained personnel required to implement them. Because their productivity is suspect, status and labour-saving loans cannot be expected to achieve high

Table 55

The extent and associated repayment rates of Credit Organization of Zambia loans grouped into three loan types, Mumbwa and Katete cultivators

Loan group	Received	Due at 31.10.69	Repaid at 31.10.69	% repaid of that due
	Aggregate amounts in Kwacha [1] (including interest)			
Package, production-orientated loans [2]	3294 (16)	900 (11)	870 (11)	96.7
Non-package, production-orientated loans [3]	9015 (27)	7775 (27)	1636 (9)	21.0
Status and labour-saving loans [4]	2790 (28)	2404 (28)	141 (5)	5.9

1 The number of cultivators within each loan group associated with these amounts is given in brackets.

2 Egg-production units, tobacco-production packages, cotton-production packages

3 Tractors and engine-powered machinery, fertilizer, ox implements, stumping (land clearance), seed

4 Cattle, motive-power hire

repayment rates and it is difficult to justify this type of loan in the farming situation in Mumbwa and Katete. However, the non-package, production-orientated loans must remain of potential importance, and the next section of this chapter is concerned with examining features of loans within this category, to see whether any factors not mentioned so far can be identified as important to the success of credit extended for these loan types.

(3) Credit and innovation

9.7 In Chapter 5 it was suggested that the use of credit for assisting in the introduction of innovations in peasant farming was unsatisfactory, except when this could be incorporated as part of a comprehensive package scheme. Part of the credit issued in Mumbwa and Katete was of this latter type. The loans involved here were those for egg-production units, for tobacco production and for cotton production. However these loans formed only about 20 per cent, by value, of the total credit issued[6]. It is likely that much of the non-package credit provided by the Credit Organization of Zambia was issued basically as an incentive to persuade cultivators, who had not hitherto used a particular innovation, to adopt it as part of their farming programme. The production-orientated, non-package type of loan is that which was used in this way and, of the loan

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(6) Data for cotton-production and tobacco-production package loans were only available for 1967/68 and 1968/69, even though loans of this type were made over the whole of the period for which other credit data were collected. The percentage quoted was calculated with an allowance built in for the fact that the data collected covered a variety of time periods.

types concerned here, that for fertilizer purchase was the type used most often by extension officers as an incentive for cultivators to innovate.

9.8 Two approaches are possible when examining the suitability of production-orientated credit for initiating the use of farm innovations outside package schemes.

(i) The farming records of borrowers could be examined and, on the basis of the borrower's past experience with the innovation concerned, the individual loans could be categorized as either initiating (when the cultivator has not hitherto used the innovation), or extending (when the cultivator has had experience with the innovation on his own farm). The respective success rates of these two categories of loan could then be examined.

(ii) The efficacy of credit as an incentive to initiate the use of a particular innovation could be investigated. Such a study would be concerned with the use of the innovation in question, in subsequent seasons, once the cultivator had had access to credit to use the innovation on a previous occasion.

The first method is credit-orientated in that the assessment is made dependent on the success of the credit operation as such, and not on the subsequent adoption or rejection of the innovation by the cultivator. The second method does not allow the extending and initiating types of loans to be compared in terms of credit-success, but it does permit an examination to be made of the efficacy of a credit-induced, initial use of an innovation

in persuading a cultivator to adopt that innovation. Information concerning the borrowers' use or non-use of the innovation concerned, prior to the receipt of credit for the purchase of the innovation, would be required in order for the first line of investigation to be used. This information was not available for the survey cultivators. However, data were collected which enabled the second method of assessment to be used.

9.9 This analysis, to test the efficacy of experience with a credit-purchased innovation as a means to persuading cultivators to innovate, is concerned with fertilizer. This input has been chosen since, as mentioned above, credit-purchase as an incentive was used more for this innovation, by the Extension Service, than for any other type of input, the initiative for many fertilizer-purchase loans having come not from the cultivators but from extension officers. These officers were, in part, responsible for the appraisal of loan applications made to the Credit Organization of Zambia, and, at the same time, were charged with the task of persuading cultivators to apply for fertilizer loans.

9.10 In all, over the period for which data were collected, 14 survey cultivators in the Mumbwa and Katete areas obtained fertilizer loans to the value of K 2024 from the Credit Organization of Zambia. The repayment rate for these loans was 12.1 per cent. Of the 14 borrowers, only one obtained a loan for fertilizer purchase in the last year for which data were collected. All of the remaining 13 had opportunity, subsequent to their having received fertilizer credit, to purchase fertilizer for cash and to make use of it in their crop-

production programmes[7]. However, only three cultivators did so. The latter purchased, for cash, very much less fertilizer than they had received earlier on credit. A comparison of the amount received on credit and the subsequent cash purchase of fertilizer is given in Table 56. The results presented in the table strongly suggest that the use of credit to initiate fertilizer usage by cultivators in Mumbwa and Katote very largely failed to bring about the adoption of this innovation by these cultivators. A further study of the applicability of the use of 'initiating' credit in farming development (outside package schemes) is made in the following section.

(4) A trial scheme, using credit to assist in the introduction of innovations to selected cultivators in the Mumbwa sample

9.11 In an attempt to study the effectiveness of the incentive effect of credit availability for the purchase of fertilizer and hybrid seed for maize production, a trial credit scheme was conducted amongst UNZALPI sample cultivators in Mumbwa. This scheme began in August 1969 when, of the 135 sample cultivators in the district, 18 were invited to a meeting in order to discuss their possible participation in a one-season credit scheme. These 18 cultivators were carefully selected. They were all farmers, that is, they were motivated to earn a cash income from farming; all had ample labour at their command; all

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[7] None of these 13 cultivators, had they wished to apply fertilizer to their crops in the final year of data collection, owned stocks of fertilizer such that further purchases would have been unnecessary.

Table 56

Fertilizer received on credit,
and subsequent cash-purchases of fertilizer,
Mumbwa and Katete cultivators [1]

Borrowing group	Number of cultivators in group	Value of fertilizer obtained on credit	Amount repaid on these loans	Value of subsequent cash-purchased fertilizer
		Aggregate amounts in Kwacha (including interest)		
Cultivators who made cash purchases of fertilizer subsequent to receiving fertilizer on credit	3	741	40	76
Cultivators who made no subsequent cash-purchase of fertilizer [2]	11	1283	191	-

1 The time period involved is 1964/69 for Mumbwa and 1965/69 in Katete.

2 One of these cultivators received a loan for fertilizer purchase during the 1968/69 farming year. Consequently there was no opportunity to observe the policy of this cultivator with regard to the cash purchase of fertilizer, subsequent to his acquiring fertilizer on credit.

were considered capable of handling hybrid maize seed and fertilizer, in accordance with instructions; above all, none of the 18 had had previous experience of using these farming innovations. Before the meeting, a standard, per-acre maize-production pack was formulated. This formulation was done in consultation with local extension officers. The pack provided, for each acre, K 4.23 worth of hybrid maize seed, and fertilizer to the value of K 16.40. The proposition put to the 18 farmers, all of whom responded to the invitation to attend the meeting, was that they could obtain as many one-acre maize-production packs as it was considered they could profitably use. The cultivators were offered participation in the scheme on the following terms. A deposit of K 10.30 per acre (half the cost) was to be paid on placing a firm order. Payment of the balance, plus interest, was to be made by a stop-order arrangement with the Mumbwa maize-buying depot[8]. As an added incentive, free delivery, in time for planting, was promised, together with special assistance from local extension officers in the handling of the inputs.

9.12 The initial response was enthusiastic and, at the meeting, 14 cultivators requested a total of 134 one-acre maize-production packs. An undertaking was given to visit each of these respondents, individually, to finalize the loan arrangements and to collect the 50 per cent deposit. These visits were made during October, 1969. The final arrangements differed, as follows, from the initial response to the plan.

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[8] Credit for the balance was arranged with the Lusaka office of a large commercial bank.

(i) Of the 14 initial respondents, only four gave firm orders.

(ii) Only one of these four 'final' respondents accepted the components of the maize-production pack as proposed. The other three all wished to reduce the proportion of fertilizer to seed in their orders. Their wishes were acceded to in this respect.

(iii) The final order was for maize seed and fertilizer to a total value of K 131, less than five per cent of the value of the initial response, namely K 2767.

9.13 The two main features of the scheme, were, firstly, the small size of the final response, and, secondly, the non-acceptance of the experts' recommendation by three out of the final group of four borrowers. Detailed results of the scheme are given in Table 57. This table also gives the cash savings of each cultivator, as at October 1969, that is, at the same time as the final orders were being taken for the loan scheme. Clearly, with the possible exception of cultivator number 2[9], shortage of money does not appear to be a very strong reason for non-participation in the scheme, since any cultivator who did not feel he could manage a deposit at the level of his initial order was still encouraged to participate, even if this had to be at a much lower level than that envisaged earlier.

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[9] In the period between the initial meeting and the individual interview this cultivator paid a court fine of K 100. This helps to explain his relatively low cash-savings value.

Table 57

Results of the trial credit scheme, testing the efficacy of credit as an incentive to innovate, Mumbwa cultivators, 1969.

Cultivator number	Initial order	Initial deposit required	Final order	Cash savings [1]
	Value in Kwacha			
1	825	412	-	100
2	413	206	-	10
3	248	124	-	721
4	248	124	-	100
5	227	113	50	360
6	206	103	-	60
7	165	82	-	208
8	103	51	-	580
9	83	41	-	48
10	83	41	-	300
11	83	41	-	200
12	41	20	9	25
13	21	10	21	1200
14	21	10	51	100
Totals	2767	1378	131	4012

1 These cash savings values were recorded a few days before the final orders were taken.

9.14 The second feature of the results, namely the non-acceptance of the experts' recommendation with regard to the relative quantities of hybrid seed and fertilizer to use, may well be linked closely, in the sense of having a common cause, to the low overall level of response to the scheme. Both these results are likely to have been produced by a lack of a basic conviction regarding the productivity of the inputs themselves(10). In these circumstances the mere offer of credit to cover half the cost of the innovative inputs, particularly when it is understood that the repayment is under strict control, is clearly not a sufficient inducement to use the inputs. Moreover, there is no logical reason why it should be so, since, if a potential borrower does not expect any profit from using the improved inputs, then there is no point in him introducing them into his farming programme. The only circumstances in which he may do so is when he knows that the credit scheme involved is apparently able to absorb heavy losses in respect of the non-repayment of loans - as was the case with the Credit Organization of Zambia.

(5) Credit and the use of innovative farming techniques

9.15 The inapplicability of the use of credit to assist in the introduction of innovative techniques, except where package principles are involved, has been demonstrated above. On the basis of this evidence, then, the use of credit as a development

(10) Two of the final respondents wished to increase the hybrid seed to fertilizer ratio in the pack; the third respondent wished to confine his loan to hybrid seed alone. This suggests that these three cultivators were happier about the productivity of hybrid seed than they were about that of fertilizer.

tool must be other than as an incentive to innovate. This section is concerned with examining the records of the Mumbwa and Katete survey co-operators in an attempt to identify the role of credit in farming development in these areas.

9.16 The data in Table 52 indicate that, during the period studied, the Mumbwa and Katete survey co-operators repaid a total of K 7137 to loan agencies. Although this was only 43 per cent of the total sum due at the end of October 1969, some borrowers did repay their loans in full. The latter borrowers accounted for K 4234 of the total amount repaid. Of this sum K 900 was repaid for package-type loans, in which repayment, provided the crop was successful, was made fairly certain by a tightly-controlled marketing system. Of the balance, K 800 was repaid in respect of loans granted for the purchase of grinding mills. These were, virtually, non-farming business enterprise loans. The remaining K 2534 was repaid in respect of non-package, production-orientated farming loans, for fertilizer (K 134) and tractors, implements and other engine-powered machinery (K 2400). It is the group of cultivators who repaid these non-package, production-orientated loans which provides most interest, since, if credit is to play a role, outside package schemes, in the development of farming, then it is in the fields of machinery, seed and fertilizer purchase that this role is likely to be found.

9.17 Only four cultivators completely repaid their non-package, production-orientated loans. One borrower obtained K 84 worth of fertilizer credit and a K 1200 loan for a new tractor. One other cultivator borrowed K 50 for the purchase of fertilizer,

whilst two cultivators borrowed K 800 and K 400 for tractor and irrigation equipment purchase respectively. Three of the four were ranked in the top ten cultivators in the sample, in farm production terms. The fourth, who borrowed K 50 for fertilizer purchase, was close to the median point in terms of farm production. Together, the four cultivators accounted for 8.6 per cent of the farm production and 9.0 per cent of the cash income of the 239 sample co-operators. The three machinery purchasers in this group all obtained their credit from commercial firms. The strict repayment policy pursued by these firms may, in part, explain the repayment record of the three borrowers in question. However, their ability to repay, and to repay relatively large sums, marks them as suitable recipients of institutional and commercial credit. Credit then, on strict commercial terms, has a role in the areas studied, but from the evidence available, this role appears to lie in assisting the larger, more advanced cultivator. More specifically, it is likely that the role of credit in farm development lies in extending the use of purchased inputs on a given farm, once these inputs have commended themselves to the cultivator concerned, as indicated by his having invested his own funds in their purchase prior to the receipt of credit. However, owing to the non-availability of the data necessary for such a study, it has not been possible to investigate this latter proposition.

Chapter 10

Financing innovation in farming development in Mumbwa and Katete

(1) Need for farm cash investment

10.1 It has been established that the development of farming requires the use of innovations, and that most innovations, since they involve the use of purchased inputs, necessitate investment. Many cultivators are not unaware of their need for capital in order to improve their farms. Indeed, when the Mumbwa and Katete cultivators were asked to state the chief factor which they considered was restraining them from improving their farming, lack of capital, together with factors closely related to this (since they necessitate cash investment), was cited more frequently than any other factor. The full range of answers is given in Table 58. Further evidence of the fact that cultivators feel a need for monetary investment is given by the unsatisfied demand for institutional and commercial credit, as revealed in the data presented in Chapter 9. During the period for which credit data were collected, the value of loan requests totalled K 42 300, whilst the loans actually received by cultivators totalled K 21 349 [1]. Many of the loan requests may well have

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[1] In the Mumbwa district the total number and value of loan requests was lower than it might otherwise have been because many Rhodesians, and members of the political party in opposition - the African National Congress - were reluctant to apply to the government credit agency for credit.

Table 58

Constraints to farming progress
as stated by Mumbwa and Katete cultivators

Stated constraint to farming progress	Number of cultivators n=238
Lack of capital, tractor, equipment	117
Lack of labour	30
Age/sickness	28
Lack of cattle	27
No interest in farming	11
Lack of knowledge	8
Lack of land	3
Number of cultivators identifying a constraint [1]	224

[1] Fourteen cultivators stated that nothing was hindering their farming progress.

been poor propositions from a productivity point of view. Nevertheless, the figures do indicate a realization on the part of cultivators that increased monetary investment is necessary in order to bring about improvements in farming. This concluding chapter draws together the findings of earlier sections with regard to the role of money in agricultural development in the two areas of Zambia which were studied.

(2) The role of co-operative savings and credit societies

10.2 Chapters 6, 7 and 8 indicated both the extent of the local monetary resources and the current constraints to the investment of these resources in local farming. One overall conclusion of Chapter 8 was that, although the financial resources of the two rural communities were substantial, there was little scope for individual cultivators to increase greatly their level of farm investment. Basically, then, the problem is to effect a means whereby greater use can be made of the community financial resources. This is particularly important in the light of the villager-farmer concept, for the essence of this is that only part of the rural community is anxious to commercialize its farming. However, ownership of funds is not confined to the farmer group; consequently the overall improvement of the farming in the community would necessitate the farmers not only making use of their own funds, but also having access to those of the villagers. Private borrowing and lending is one means by which better use might be made of some of the funds of the community,

and, as indicated in Chapter 8, this was in fact taking place amongst the Mumbwa and Katete cultivators studied. However, the amounts involved in these arrangements were small, judged both by the level of farm investment expenditure and by the total cash resources of the community.

10.3 The operation of a more formal type of intra-community borrowing and lending, through co-operative savings and credit societies, was examined in the last section of Chapter 8. Unfortunately, the material available concerned societies which were situated well away from the main survey areas, and which were different, tribally, from the cultivators studied in Mumbwa and Katete. Moreover, the Southern Province societies themselves were newly established. Therefore the scope is limited for extending to the main study areas the conclusions reached regarding these societies. Nevertheless, the evidence presented showed that the societies had been successful in attracting some cash savings from members and it might be expected that, as time goes on, the proportion of members' cash savings deposited with the societies would increase.

10.4 The analysis of cultivators' private borrowing and lending arrangements showed that the vast bulk of these involve conditions similar to those which pertain in the operations of co-operative savings and credit societies. Thus, as indicated in section (5) of Chapter 8, practically all the borrowing and lending was between friends and relatives, with the security being basically that dependent on character and on obligation between people who knew one another well. Since these characteristics form the basis

of credit union lending, they might be expected to facilitate the successful introduction of such societies in the Mumbwa and Katete areas. In addition, and as noted in section (4) of Chapter 7, most cultivators in these areas were not enthusiastic about existing savings institutions. Ninety-three of the 235 cultivators making a response to the questions regarding savings accounts cited lack of accessibility as their reason for not holding such accounts, whilst a further 91 explained that they did not think that their funds were sufficiently substantial to warrant their having a savings account. Clearly, a local co-operative savings and credit society would meet the first objection. The second reason for not holding institutional savings accounts is likely to be quite valid in some cases, whilst in others it is based on a misapprehension regarding the commercial world - a misapprehension which is common amongst Zambian peasants and which leads them to regard financial institutions as the preserve of wage-earners, of people involved in business and, a fortiori, of non-Africans. Since a co-operative savings and credit society is, by its very nature, an extension of village society, with the common bond between members being something clearly identifiable and understandable, then it might be expected to be less affected than the existing savings institutions by this second reason for not holding savings accounts.

10.5 The two co-operative savings and credit societies studied were situated in the Southern Province of Zambia. As mentioned in section (6) of Chapter 8, the cultivators in this part of the

country tend to own cattle to a greater extent than do the cultivators in either Mumbwa or Katete. A study of the 107 cultivators in the sub-group of Society 1 showed that, of the mean total wealth of members, 83 per cent was accounted for by the value of their cattle[2]. By contrast, in Mumbwa and Katete, cattle account for only nine per cent of the total value of cultivators' possessions; this figure rises to 19 per cent if only the cattle owners (numbering 57 cultivators out of 239) are taken into account. Because of this lower propensity to accumulate value in cattle, the cash savings of the latter cultivators form a greater proportion of their total wealth than do the cash savings of the cultivators in the sub-group of the Southern Province credit union studied. (The relevant data are given in Table 59.) Consequently, co-operative savings and credit societies in the Mumbwa and Katete areas might well attract a greater amount of money per member than has been the case in the two societies studied in the Southern Province.

10.6 Given the information available concerning the cultivators in Mumbwa and Katete, and given the experience of the two Southern Province credit unions, it is now possible to examine the likely effect of introducing co-operative savings and credit societies into the two main study areas. This is done by setting up two hypothetical credit unions, one in each area, amongst survey co-operators. The levels of deposits which might be

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[2] The 'total wealth' is analogous to that calculated for Mumbwa and Katete cultivators in Chapter 6. It includes the value of all possessions, together with the cleared value of the land currently under cultivation.

Table 59

Cash savings, cattle and total wealth,
Mumbwa, Katete and Southern Province cultivators

		Mumbwa and Katete cultivators		Southern Province cultivators
		Cattle owners n=57	Non-cattle owners n=182	n=107
Value of all possessions	(Kwacha per cult.)	1263	456	1279
Value of cattle	(Kwacha per cult.)	241	-	1062
Value of cash savings	(Kwacha per cult.)	176	77	45
Value cattle / Value total possessions	%	19.1	-	83.0
Value cash savings / Value total possessions	%	13.9	16.9	3.5

expected, and the proportion of the total funds lent to members, are based on the experience of the two Southern Province credit unions mentioned. Some results of forming these hypothetical credit unions are given in Table 60. The data concerning the Society 1 sub-group are used to calculate the amounts which it might be expected that Mumbwa and Katete members would deposit with their respective credit unions. As explained in Chapter 8, Society 2 has conducted a more 'usual' type of lending policy than has Society 1. Therefore, the lending policy of the hypothetical Mumbwa and Katete societies has been based on that of Society 2.

10.7 The object of the exercise depicted in Table 60 is to investigate the likely effect on levels of farm investment of organizing co-operative savings and credit societies amongst the survey co-operators in Mumbwa and Katete. Certain assumptions must be made in order to carry out this exercise. Some of these have already been mentioned, namely, the assumption that the pattern of deposits and loans would be similar to that of the existing societies in the Southern Province. A further set of assumptions is implicit in the last two rows of Table 60. In these rows, a forecast is made of the amounts of money which would become available, on a per cultivator basis, for farm investment. In row A it is assumed that only the farmers will be the recipients of loans from the societies. In row B the farmers in the top-decile (ranked, as in Chapter 6, on the basis of the value of total farm production, in terms of maize) have been excluded, on the grounds that these farmers would be likely to be eligible for

Table 60

Some financial details of hypothetical credit unions formed from the Mumbwa and Katete sample cultivators

		Southern Province[1]	Mumbwa	Katete
	Number of members	107	134[2]	104
	Cash savings per member (Kwacha)	45.4	147.6	39.8
	Credit union deposits per member (Kwacha)	13.4	43.6	11.8
	Total deposits at credit union (Kwacha)	1434	5650	1227
	Number of farmers	-	67	27
A	Sum available per farmer[3] (Kwacha)	-	42	23
B	Sum available per non-top-decile farmer[3] (Kwacha)	-	64	24

[1] Sub-group of Society 1

[2] A Mumbwa shopkeeper has been omitted from this exercise.

[3] The assumption made here is that half of the funds of each credit union would be available to farmers for productive purposes. This is based on the current (1969) lending practice of Society 2, but assumes that all productive loans would be for farming purposes.

institutional and commercial credit and would not therefore need to borrow from the local credit union. Only one farmer in Katete is in this group, but 23 of the 67 Mumbwa farmers are in the top decile, and the amount of society money available, per borrower, might be expected to be increased accordingly. If the figures in row A are compared with the current (1968/69) level of expenditure on seasonal farm inputs and the assumption made that the loan funds would be used to purchase more seasonal inputs, then increases of 63 per cent in Mumbwa and 37 per cent in Katete in the level of expenditure on these inputs would be permitted.

10.8 The results produced by introducing hypothetical credit unions to the Mumbwa and Katete areas may be regarded as being rather unimpressive, but this is due chiefly to the fact that the figures are based on the experience of newly-introduced societies. Being new, these societies have not yet gained the full confidence of their members, thus the proportion of total monetary wealth which is deposited is restricted. In addition, because the societies' lending experience is limited, their lending policy has tended to be somewhat conservative, resulting in less than half the total deposits being used for making loans. Naturally, some caution is necessary in deciding the proportion of society funds to be lent, particularly in the period before it is possible to determine the optimum level at which reserves should be kept. The Southern Province societies have not yet reached this point, but, as they gain more lending experience, the proportion of their funds which they make available to borrowers

might be expected to increase. The analysis of the generation of cash savings, as described in section (3) of Chapter 7, indicated that cash income from crop sales, self-employed activities and contracting - all income sources which would benefit by greater mobilization of the cash savings of the community - is particularly important in the generation of cash savings. The economic conditions within the rural community, therefore, would appear to favour the continued accumulation of monetary capital, thus providing a greater pool from which a credit union might attract deposits, and thus, in turn, enabling more and larger loans to be granted to members who need them.

10.9 In section (4) of Chapter 8, the Mumbwa and Katete cultivators' knowledge, and use, of innovative inputs was examined. It was concluded that lack of conviction regarding the productivity and profitability of innovations appeared to be a constraint to the investment of funds in farming by cultivators. An auxiliary development effect of co-operative savings and credit societies is that they provide an environment which enables cultivators to gain knowledge more readily about farming innovations. Thus, in the sub-group of Society 1, members' annual expenditure on seed, fertilizer and insecticide rose from K 9.8 per cultivator in 1967 to K 30.1 in 1969. This effect may well be due, at least in part, to the fact that the normal business of a society provides a clearing house within which members gain a close knowledge of the productive activities of their colleagues. A similar effect might be expected with regard to a co-operative savings and credit society helping to reduce the potency of the

non-commercial attitude towards farming in the rural community, but no evidence can be offered on this particular issue.

(3) Conclusions

10.10 This study, of the role of money in the development of farming in two areas of Zambia, was originally occasioned by the belief that the use of external credit, as an incentive for cultivators to adopt the production innovations which development involves, was an inappropriate method of financing the initial steps towards commercial farming. It was considered, rather, that existing financial resources within the villages would provide a suitable source of money for initiating the development process. These propositions were developed, theoretically, in Chapters 1 to 4, and set out in the form of hypotheses in Chapter 5. The subsequent examination of data from the main study areas of Mumbwa and Katete, together with the ancillary study of the two co-operative savings and credit societies in the Southern Province, has yielded the following results.

(i) High production levels, both on a per-farm and a per-family-member basis, are closely associated with high levels of farm capital and, in particular, with capital and current inputs which have been purchased in the cash economy.

(ii) External credit has proved to be ineffective as a means of persuading cultivators to adopt the use of fertilizer in maize production, the latter being an innovation of major importance in farming development in the main study

areas. Poor repayment results have also been a feature of credit issued to cultivators who are at a low level of farming development. Regardless of whether the non-repayment of loans has been caused by poor administration or by poor loan productivities, this is a further indication of the inapplicability of external credit as a means of initiating the development process. However, the more advanced cultivators have shown that they can benefit by external credit since it enables them to use more of the innovations which have already commended themselves to these cultivators.

(iii) The cultivators, as a whole, possess monotary resources which, if invested in farming, might be expected to bring about worthwhile increases in production.

(iv) Of the cultivators' sources of income, those most directly affected by increased monetary investment, namely crop sales, contracting and self-employed activities, are closely associated with the generation of cash savings. Thus, investment in these enterprises might be expected to increase further the monetary resources of the rural community.

(v) Very real constraints operate to restrict the quantity of money which cultivators can release from their stock of cash savings. In this connection, a major need is for a 'precaution' fund to meet contingency expenditure. The latter has been shown to be considerable.

(vi) Further constraints to innovation in farming are those based on social factors, such as the unwillingness of

many cultivators to risk unpopularity through appearing to wish to progress economically at a faster rate than their colleagues in the village. Further related constraints are the factors involved in the non-commercial milieu of farming.

(vii) The co-operative pooling of cultivators' cash savings has been advocated as a means to overcoming the constraints to the release of local savings for investment, whilst at the same time providing a suitable environment for both the development of a commercial attitude towards farming and a better appreciation of the productivity and profitability of farming innovations. The opportunity for testing these concepts was limited, but sufficient evidence was available to indicate that the co-operative savings and credit society is, potentially, a worthwhile means of initiating development, being based very closely on existing private lending and borrowing practices.

10.11 As a result of these findings it is now possible to state that, in the two areas studied, considerably more reliance can be placed upon local sources of finance for farm development, at the village level, than has been the case in the past. However, it is likely both that the investment environment would be enhanced, and that the quantity of investment funds available would be increased, by the promotion of co-operative savings and credit societies. The role of the government in this development strategy would be to provide the necessary control over any societies formed, whilst continuing to publicize innovative farming techniques through the

Extension Service. In addition, the government might provide credit, but this would be restricted to advanced individual farmers, with the possibility, once co-operative savings and credit societies become well-established, of making funds available to individual societies as a whole. This would allow them to provide a better service to members, enabling the latter to invest to a greater extent in farming improvements.

APPENDIX I

Bibliography

Abbreviations used for the names of periodicals are those given in:

Brown, P. and Stratton, G.B., (eds.), World list of scientific periodicals published in the years 1900-1960, 4th edition, 1963, London, Butterworths

and

Porter, K.I. and Koster, C.J., (eds.), World list of scientific periodicals, new periodical titles 1960-1968, 1970, London, Butterworths.

ADELMAN, IRMA and MORRIS, CYNTHIA TAFT, (1971), An anatomy of patterns of income distribution in developing nations, Part 3, Final Report, mimeo., Evanston, Chicago, Northwestern Univ.

AGRAWAL, B.L., (1963), "Risk and uncertainty in agriculture: implications for agricultural credit", Indian J. agric. Econ., Vol.19, No.1, (proceedings of 23rd Conference), pp.132-142.

ALLAN, W., (1965), The African husbandman, London, Oliver and Boyd.

All-India Rural Credit Survey, (1954), Report of the committee of direction, Vol.2, Bombay, Reserve Bank of India.

AMOGU, OKWARA O., (1956), "Some notes on saving in an African economy", Social and Economic Studies, Institute of Social and Economic Research, Univ. of the West Indies, Vol.5, No.2, pp.202-209.

ANANIA, SPARTACO, (1970), A systematic approach to agricultural credit and saving problems in developing countries, mimeo., Rome, Food and Agriculture Organization.

ANANIA, SPARTACO, (1971), COPAC Country Note No.1, Zambia, preliminary draft mimeo., Rome, Food and Agriculture Organization.

ANDERSON, C.A., (1965), Education and the transition from subsistence to monetary production, mimeo., Univ. of Chicago, School of Education.

Annual Report of the Ministry of Agriculture 1965, (1967), Lusaka Govt. Printer.

ANTHONY, K.R.M. and UCHENDU, V.C., (1970), "Agricultural change in Mazabuka District, Zambia", Ed Res. Inst. Stud., Stanford Univ., Vol.9, No.3, pp.215-267.

AQUINA, SISTER MARY, (1964), "The social background of agriculture in Chilimanzi Reserve", Rhodes-Livingstone J., No.36, Dec.1964, pp.7-39.

ARBUCKLE, G.A., (1969), "Economic and social development in the Fiji Islands through Credit Unions", in RUNCIE, NEIL, (ed.), Credit Unions in the South Pacific, pp.90-108, London, Univ. of London Press.

ARNEIL, S.F., (1969), "The nature of Credit Unions", in RUNCIE, NEIL, (ed.), Credit Unions in the South Pacific, pp.15-55, London, Univ. of London Press.

AVRAM, P., (1965), A report on the development of a pilot project in directed agricultural production credit, Quito-Ecuador, U.S. Agency for International Development - CUNA International.

BAILEY, F.G., (1960), "An Oriya Hill Village: II", in SRINIVAS, M.N., (ed.), India's Villages, 2nd edition, pp.131-146, London, Asia Publishing House.

BAILEY, F.G., (1964), "Capital, saving and credit in Highland Orissa", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.104-132, London, George Allen and Unwin.

BAILEY, F.G., (1966), "The peasant view of the bad life", (examples from Orissa, India), The Advancement of Science, Vol.23, No.114, Dec.1966, pp.399-409.

BARBER, WILLIAM, (1961), The economy of British Central Africa, London, Oxford Univ. Press.

BARBER, WILLIAM, (1970), "Dualism revisited: economic structures and the framework of economic policy in a post-colonial setting", in STREETEN, PAUL, (ed.), Unfashionable economics: essays in honour of Lord Balogh, pp.33-55, London, Weidenfeld and Nicolson.

BASCOM, WILLIAM R., (1952), "The esusu: a credit institution of the Yoruba", Jl R. anthrop. Inst., Vol.82, Part 1, pp.63-69.

BECKERMAN, W. and BACON, R., (1970), "The international distribution of incomes", in STREETEN, PAUL, (ed.), Unfashionable economics: essays in honour of Lord Balogh, pp.56-75, London, Weidenfeld and Nicolson.

BELSHAW, C.S., (1955), "In search of wealth: a study of the emergence of commercial operations in the Melanesian Society of South-eastern Papua", Memoirs American Anthropological Association, No.80, Sep.1955, Menasha, Wisconsin.

BELSHAW, C.S., (1964), "Institutions for capital formation and distribution among Fijians", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.187-206, London, George Allen and Unwin.

BELSHAW, C.S., (1964a), "Social structure and economic growth", Int. soc. Sci. J., Vol.16, No.2, pp.217-228.

BELSHAW, H., (1952), "The mobilization and use of domestic capital in relation to agricultural improvement", in BAUER, E.K., (ed.), Proceedings of the International Conference on agricultural and co-operative credit, Vol.1, pp.451-461, Berkeley, Univ. of California.

BELSHAW, H., (1959), Agricultural credit in economically under-developed countries, F.A.O. agric. Stud., No.46, Rome, Food and Agriculture Organization.

BENEDICT, BURTON, (1964), "Capital, saving and credit among Mauritian Indians", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.330-346, London, George Allen and Unwin.

BESSELL, J.E., ROBERTS, R.A.J. and VANZETTI, N.R., (1968), Universities of Nottingham and Zambia agricultural labour productivity investigation (UNZALPI), Report No.1, Survey field work, Univ. of Nottingham/Univ. of Zambia.

BESSELL, J.E., ROBERTS, R.A.J. and VANZETTI, N.R., (1969), Universities of Nottingham and Zambia agricultural labour productivity investigation (UNZALPI), Report No.2, Analysis of pilot year data, Univ. of Nottingham/Univ. of Zambia.

The Universities of Nottingham and Zambia agricultural labour productivity investigation (UNZALPI), Report No.3 is listed under ELLIOTT, C.M., et al.

BESSELL, J.E. and ROBERTS, R.A.J., (1971), Income and expenditure patterns in relation to age of cultivator and education of family, Universities of Nottingham and Zambia agricultural labour productivity investigation (UNZALPI), Report No.5, Univ. of Nottingham/Univ. of Zambia.

BETTISON, D.G. and RIGBY, P.J., (1961), Patterns of income and expenditure, Blantyre-Limbe, Nyasaland, Rhodes-Livingstone communication, No.20, Lusaka, Rhodes-Livingstone Institute.

BOHANNAN, PAUL, (1959), "The impact of money in an African subsistence economy", J. Economic History, Vol.19, No.4, Dec.1959, pp.491-503.

BOSA, GEORGE R., (1969), The financing of small scale enterprises in Uganda, Kampala, Makerere Institute of Social Research, Oxford Univ. Press.

BOSERUP, E., (1965), The conditions of agricultural growth, London, George Allen and Unwin.

BOTTOMLEY, A., (1966), "A monetary strategy for underdeveloped rural areas", J. agric. Econ., Vol.17, No.2, September 1966, pp.139-149.

BRADY, D.S. and FRIEDMAN, R.D., (1947), "Savings and the income distribution", Studies in income and wealth, 10, New York, National Bureau of Economic Research, pp.247-265.

BRELSFORD, W.V., (1965), The tribes of Zambia, 2nd edition, Lusaka, Govt. Printer.

BRINEGAR, G.K. and FETTIG, L.P., (1968), Some measures of the quality of agricultural credit, New York, Nat. Bureau of Economic Research.

BROSSARD, DARIO, (1952), "Features of supervised credit in Latin America", in BAUER, E.K., (ed.), Proceedings of the International Conference on agricultural and co-operative credit, Vol.1, pp.298-304, Berkeley, Univ. of California.

CARR, RAYMOND, (1969), "Mexican agrarian reform, 1910-1960", in JONES, E.L. and WOOLF, S.J., (eds.), Agrarian change and economic development, pp.151-168, London, Methuen.

Central Planning Office, Office of the President, Zambia, (1965), An outline of the transitional development plan, Lusaka, Govt. Printer.

Central Statistical Office, Zambia, (1970), Census of population and housing, 1969, Lusaka, Govt. Printer.

CHAMBERS, D.V., (1965), "Capital innovations for small farms", in SMITH, H.E., (ed.), Agricultural development in Tanzania, pp.78-88, Nairobi, Oxford Univ. Press.

CHAYANOV, A.V., (1925), The theory of the peasant economy, Translated into English, 1966, Homewood, Illinois, Am. Econ. Ass.

CHIBOWA, M.C., (1968), Agricultural development with special reference to Zambia, Unpublished M.Sc. dissertation, Univ. of Nottingham.

Chilalo Agricultural Development Unit, (1970), Final report of the appraisal team, Addis Ababa, Aug.1970, for the Swedish International Development Agency and the Imperial Ethiopian Government.

CLARK, COLIN, (1957), The conditions of economic progress, 3rd edition, London, Macmillan.

CLARK, COLIN and HASWELL, M.R., (1964), The economics of subsistence agriculture, London, Macmillan.

CLAYTON, E.S., (1961), "Economic and technical optima in peasant agriculture", J. agric. Econ., Vol.14, No.3, May 1961, pp.337-347.

CLAYTON, E.S., (1963), Economic planning in peasant agriculture, mimeo., Wye College, Dept. Agric. Econ., Univ. of London.

CLAYTON, E.S., (1964), Agrarian development in peasant economies, Oxford, Pergamon Press.

CLAYTON, E.S., (1968), "Opportunity costs and decision making in peasant agriculture", Neth. J. agric. Sci., 16, pp.243-252.

COLLINSON, M.P., (1968), "The evaluation of innovations for peasant farming", E. Afr. J. of Rural Development, Vol.1, No.2, July 1968, pp.50-59.

COSTER, R.N., (1958), Peasant farming in the Petauke and Katete areas of the Eastern Province of Northern Rhodesia, Agric. Bull., Dept. Agric., North. Rhod., No.15, Lusaka, Govt. Printer.

DALTON, GEORGE, (1961), "Economic theory and primitive society", Am. Anthrop., Vol.63, No.1, Feb.1961, pp.1-25.

DALTON, GEORGE, (1964), "The development of subsistence and peasant economies in Africa", Int. soc. Sci. J., Vol.16, No.3, pp.378-389.

DALTON, GEORGE, (1967), Tribal and peasant economies, New York, Natural History Press.

DAPLAH, D.B., (1969), "Report on the credit union movement in Ghana", Report of the Seventh African Conference on the mobilization of local savings. Aug.1969, Ghana, pp.26,27, Madison, Wisconsin, CUNA International.

DAVEY, P.L.P., (1963), "Household budgets in rural areas", Econ. Bull. (Ghana), Vol.7, No.1, pp.17-28.

DEANE, PHYLLIS, (1947), "National income: problems of social accounting in Central Africa", Rhodes-Livingstone J., No.5, pp.24-43.

DEANE, PHYLLIS, (1953), Colonial social accounting, London, Cambridge Univ. Press.

DE GAAY FORTMAN, BASTAAN, (1968), After Mulungushi - the economics of Zambian humanism, Nairobi, E.A. Publishing House.

Development Division, Office of the Vice-President, Zambia, (1969), Zambian manpower, Lusaka, Govt. Printer.

DE WILDE, JOHN C., (1967), Experiences with agricultural development in tropical Africa, Vols.1 & 2, Baltimore, Maryland, International Bank for Reconstruction and Development: Johns Hopkins Press.

DONKIN, J., (1967), "Marketing organizations of Zambia", Mon. econ. Bull. (Zambia), Ministry of Agriculture, Lusaka, Aug.1967, pp.34-39.

DUESENBERRY, JAMES S., (1949), Income, saving and the theory of consumer behavior, Cambridge, Harvard Univ. Press.

DUMONT, RENE, (1966), False start in Africa, London, Sphere Books.

EGERTON, R.A.D., (1960), Investment decisions under uncertainty, Liverpool, Liverpool Univ. Press.

EINZIG, PAUL, (1949), Primitive money, London, Eyre and Spottiswoode.

ELLIOTT, C.M., (1969), "Agriculture and economic development in Africa: theory and experience 1880-1914", in JONES, E.L. and WOOLF, S.J., (eds.), Agrarian change and economic development: the historical problems, pp.123-150, London, Methuen.

ELLIOTT, C.M., BESSELL, J.E., ROBERTS, R.A.J. and VANZETTI, N.R., (1970), Some determinants of agricultural labour productivity in Zambia, Universities of Nottingham and Zambia Agricultural Labour productivity investigation (UNZALPI). Report No.3, Univ. of Nottingham/Univ. of Zambia.

ENGBERG, H.L., (1965), "Commercial banking in East Africa", J. Mod. Afr. Stud., Vol.3, No.2, pp.177-199.

EPSTEIN, SCARLETT, (1964), "Personal capital formation among the Tolai of New Britain", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.53-68, London, George Allen and Unwin.

FAGAN, BRIAN M., (1968), A short history of Zambia, Nairobi, Oxford Univ. Press.

(F.A.O. - Food and Agriculture Organization; see under 'United Nations Food and Agriculture Organization'.)

FIELDER, R.J., (1969), The significance of the accumulation of wealth in subsistence economies, mimeo., Lusaka, Univ. of Zambia.

FIRTH, R., (1964), "Capital, saving and credit in peasant societies: a viewpoint from economic anthropology", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.15-34, London, George Allen and Unwin.

FIRTH, R. and YAMEY, B.S., (eds.), (1964), Capital, saving and credit in peasant societies, London, George Allen and Unwin.

FIRTH, R., (ed.), (1967), Themes in economic anthropology, London, Tavistock.

FIRTH, R., (1970), "Social structure and peasant economy: the influence of social structure upon peasant economies", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.23-37, London, Frank Cass and Co.

FOGG, C. DAVIS, (1965), "Economic and social factors affecting the development of smallholder agriculture in Nigeria", Economic development and cultural change, Vol.13, No.3, pp.280-286.

FORBES, A.P.S. and ROBERTS, R.A.J., (1970), Draft report of the Ethiopian projects, Rome, Food and Agriculture Organization, (restricted).

FOSTER, GEORGE M., (1942), A primitive Mexican economy, Seattle, Univ. of Washington Press.

FRIEDMAN, MILTON, (1957), A theory of the consumption function, Princeton, Princeton Univ. Press.

FRISO, H.B.J., (1968), Report and recommendations on rural agricultural credit in Zambia, mimeo., Lusaka, G.R.Z., Ministry of Agriculture.

FRY, PETER, (1969), Some social and economic aspects of an immigrant farming community in Mumbwa district, mimeo., Lusaka, Univ. of Zambia.

FUSFELD, D.B., (1957), "Economic theory misplaced: livelihood in primitive society", in POLANYI, K., ARENSBERG, C.M. and PEARSON, H.W., (eds.), Trade and markets in the early empires, pp.342-356, New York, The Free Press.

GALBRAITH, J.K., (1952), "The role of credit in agricultural development", in BAUER, E.K., (ed.), Proceedings of the International Conference on agricultural and co-operative credit, pp.29-33, Berkeley, Univ. of California.

GALLETTI, R., BALDWIN, K.D.S. and DINA, I.O., (1956), Nigerian cocoa farmers, London, Oxford Univ. Press.

GEERTZ, CLIFFORD, (1962), "The rotating credit association: a 'middle rung' in development", Economic development and cultural change, Vol.10, No.3, April 1962, pp.241-263.

GEZA, S., (1971), The economics of Zambian agricultural policy, 1953-1970, Unpublished thesis, Oxford University.

GLUCKMAN, MAX, (1945), "How the Bemba make their living: an appreciation of Richard's 'Land, Labour and Diet in N. Rhodesia'", Rhodes-Livingstone J., No.3, June 1945, pp.55-75.

GOULDSBURY, C. and SHEANE, H., (1911), The great plateau of Northern Rhodesia, London, Edward Arnold.

Government of the Federation of Rhodesia and Nyasaland, (1963), Report of the commission of inquiry into the maize and small grains industry in Northern and Southern Rhodesia, 1962/63, Salisbury, Govt. Printer.

Grain Marketing Board, Zambia, (1966), "The place and function of the Grain Marketing Board in the national economy", Mon. econ. Bull. (Zambia), Ministry of Agriculture, Lusaka, Dec.1966, pp.32-37.

GUGLER, JOSEF, (1968), "The impact of labour migration on society and economy in sub-Sahara Africa: empirical findings and theoretical considerations", Afr. Soc. Res., No.6, Dec.1968, pp.463-486.

GULLIVER, P.H., (1955), "Labour migration in a rural economy", E. Afr. Inst. for Social Research, E. Afr. Studies, No.6, pp.33-36.

GULLIVER, P.H., (1957), "Nyakyusa labour migration", Rhodes-Livingstone J., No.21, March 1957, pp.32-63.

GULLIVER, P.H., (1958), Land tenure and social change among the Nyakyusa, Kampala, E. Afr. Inst. for Social Research.

HAGEN, E.E., (1967), "What we do not know about the economics of development in low income societies", in MARTIN, K. and KNAPP, J., (eds.), The teaching of development economics, pp.53-56, London, Frank Cass and Co.

HAILEY, S. and PETCH, H., (1967), Investigations into small scale farming systems, No.1, mimeo., Magoye, Zambia, Ministry of Rural Development.

HALL, RICHARD, (1965), Zambia, London, Pall Mall Press.

HARRISON, ALAN, (1967), Agricultural credit in Botswana, Development Studies, No.4, Dec.1967, Reading, Univ. of Reading, Dept. of Agric. Econ.

HELLEN, J.A., (1968), Rural economic development in Zambia, 1890-1964, Munich, Weltforum Verlag - Ifo-Institut für Wirtschaftsforschung.

HERSKOVITS, M.J., (1952), Economic anthropology, New York, Alfred A. Knopf.

HERSKOVITS, M.J. and HARWITZ, M., (eds.), (1964), Economic transition in Africa, London, Routledge and Kegan Paul.

HILL, POLLY, (1963), The migrant cocoa farmers of Southern Ghana, London, Cambridge Univ. Press.

HILL, POLLY, (1970), Studies in rural capitalism in West Africa, London, Cambridge Univ. Press.

HOSELITZ, BERT F., (1964), "Capital formation, saving and credit in Indian agricultural society", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.347-375, London, George Allen and Unwin.

HOUTHAKKER, H.S., (1965), "On some determinants of saving in developed and underdeveloped countries", in ROBINSON, E.A.G., (ed.), Problems in economic development, pp.212-224, London, Macmillan.

HÜBNER, G., (1970), "Private saving in Uganda", in MARLIN, PETER VON, (ed.), Financial aspects of development in East Africa, pp.93-174, Munich, Weltforum Verlag - Ifo-Institut für Wirtschaftsforschung.

HUNT, K.E., (1969), Agricultural statistics for developing countries, Oxford, Univ. of Oxford Institute of Agrarian Affairs.

HUNTER, GUY, (1969), Modernizing peasant societies, London, Oxford Univ. Press - Institute of Race Relations.

International Labour Office, (1969), Report to the Government of Zambia on incomes, wages and prices in Zambia, Geneva, International Labour Office; Lusaka, The Cabinet Office.

JOHNSON, C.E., (1956), African farming improvement in the Plateau Tonga maize areas of Northern Rhodesia, G.R.Z. Agric. Bull., No.11, Lusaka, Govt. Printer.

JOHNSON, HARRY G., (1969), "Comparative cost and commercial policy theory in a developing world economy", Pakistan Dev. Rev. (Karachi), Supplement, Spring 1969, papers delivered as the Wicksell Lectures of 1968.

JOHNSON, R.W.M., (1964a), The labour economy of the reserves, Salisbury, Univ. College of Rhodesia and Nyasaland, Dept. Econ.

JOHNSON, R.W.M., (1964b), "An economic survey of Chiwashe Reserve", Rhodes-Livingstone J., No.36, Dec.1964, pp.82-108.

JOHNSON, R.W.M., (1967), "Disguised unemployment and the village economy", Afr. Soc. Res., No.3, June 1967, pp.228-233.

JOHNSTON, BRUCE F., (1970), "Agriculture and structural transformation in developing countries: a survey of research", J. econ. Literature, Vol.8, No.2, June 1970, pp.369-404.

JONES, WILLIAM O., (1970), "Measuring the effectiveness of agricultural marketing in contributing to economic development: some African examples", Fd Res. Inst. Stud., Stanford Univ., Vol.9, No.3, pp.175-196.

JOY, J. LEONARD, (1970), "Diagnosis, prediction and policy formulation", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.376-381, London, Frank Cass and Co.

JUCKER-FLEETWOOD, E.E., (1964), Money and finance in Africa, London, George Allen and Unwin.

KAUNDA, KENNETH, (1968), Zambia's economic revolution, Lusaka, Govt. Printer.

KAUNDA, KENNETH, (1968a), Humanism in Zambia, Lusaka, Govt. Printer.

KAUNDA, KENNETH, (1969), Towards complete independence, Lusaka, Govt. Printer.

KAY, GEORGE, (1964), "Sources and uses of cash in some Ushi villages, Fort Rosebery District", Rhodes-Livingstone J., No.35, June 1964, pp.14-28.

KAY, GEORGE, (1965), Changing patterns of settlement and land use in the Eastern Province of Northern Rhodesia, Hull, Univ. of Hull.

KAY, GEORGE, (1967), A social geography of Zambia, London, Univ. of London Press.

KEYNES, J.M., (1936), General theory of employment, interest and money, London, Macmillan.

KIRKPATRICK, COLIN, (1968), "The role of the African Loan and Development Company in the field of African agriculture", Rhod. J. Econ., Vol.2, No.2, June 1968, pp.22-27.

KNIGHT, F.H., (1921), Risk, uncertainty and profit, Boston, Houghton Mifflin Co.

KUZNETS, SIMON, (1952), "The proportion of capital formation to national product", Am. econ. Rev., Papers and proceedings of the 64th annual meeting of the American Econ. Association, May 1952, pp.507-526.

LAURENT, C.K., (1969), A situation report on agricultural credit in Nigeria, Consortium for the study of Nigerian Rural Development, No.26, Ibadan, Michigan State Univ./Univ. of Ibadan.

LEWIS, W.A., (1955), The theory of economic growth, London, George Allen and Unwin.

LI, C.M., (1952), "The subsistence farmer in the process of economic development", in BAUER, E.K., (ed.), Proceedings of the International Conference on agricultural and co-operative credit, pp.151-162, Berkeley, Univ. of California.

LIPTON, MICHAEL, (1968), "The theory of the optimising peasant", J. Dev. Stud., April 1968, pp.327-351.

LIPTON, MICHAEL, (1970), "Farm price stabilization in underdeveloped agricultures: some effects on income stability and income distribution", in STREETEN, PAUL, (ed.), Unfashionable economics: essays in honour of Lord Balogh, pp.3-32, London, Weidenfeld and Nicolson.

LIVINGSTONE, DAVID, (1857), Missionary travels and researches in South Africa, London, John Murray.

LONG, ERVEN J., (1964), "Institutional factors limiting progress in less developed countries", in MOSEMAN, A.H., (ed.), Agricultural sciences for the developing nations, pp.3-15, Washington, Publication No.76 of the American Assoc. for the Advancement of Science.

LONG, MILLARD F., (1968), "Why peasant farmers borrow", Am. J. agric. Econ., Vol.50, No.4, Nov.1968, pp.991-1008.

LONG, NORMAN, (1968a), "Sociological determinants of farm management in Serenje District", Afr. Soc. Res., No.5, June 1968, pp.327-355.

LONG, NORMAN, (1968b), Social change and the individual, Manchester, Manchester Univ. Press.

MACARTHUR, J.D., (1970), "Problems of the multi-farm agency in agricultural development: some observations from East African experience", J. agric. Econ., Vol.21, No.1, Jan.1970, pp.37-41.

MAKHELE, V.M., (1969), "Progress report of the Lesotho Co-operative Credit Union League", Report of the Seventh African Conference on the mobilization of local savings, Aug.1969, Ghana, pp.32-36, Madison, Wisconsin, CUNA International.

MAKINGS, S.M., (1966), "Agricultural change in Northern Rhodesia/ Zambia 1945-1965", Fd Res. Inst. Stud., Stanford Univ., Vol.6, No.2, pp.195-247.

MAKINGS, S.M., (1967), Agricultural problems of developing countries in Africa, Nairobi, Oxford Univ. Press.

MARLIN, PETER VON, (ed.), (1970), Financial aspects of development in East Africa, African Studies, No.53, Munich, Weltforum Verlag - Ifo-Institut für Wirtschaftsforschung.

MASSELL, B.F. and JOHNSON, R.W.M., (1968), "Economics of small-holder farming in Rhodesia", Fd Res. Inst. Stud., Stanford Univ., Vol.8, (Supplement).

MAUNG, MYA, (1965), "Agricultural co-operation in Burma: a study on the value-orientation and effects of socio-economic action", Social and economic studies, (Univ. of West Indies), Vol.14, No.4, Dec.1965, pp.321-338.

MELLOR, J.W., (1966), The economics of agricultural development, Ithaca, Cornell Univ. Press.

MELLOR, J.W., (1970), "The subsistence farmer in traditional economies", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.209-227, London, Frank Cass and Co.

MILOSAVLJEVIC, B., (1970), "An appraisal of the CADU Scheme", Chilalo Agricultural Development Unit final report of the appraisal team, Addis Ababa, Swedish International Development Agency and the Imperial Ethiopian Government, pp.30-33.

Ministry of Rural Development, Zambia, (1971), Monthly Statistical Bulletin, March 1971, Lusaka.

MIRACLE, M.P., (1960), "Plateau Tonga entrepreneurs in historical inter-regional trade", Rhodes-Livingstone J., No.26, pp.34-64.

MIRACLE, M.P., (1968), "Subsistence agriculture", Am. J. agric. Econ., Vol.50, No.2, May 1968, pp.292-310.

MITCHELL, J.C., (1949), "The collection and treatment of family budgets in primitive communities as a field problem", Rhodes-Livingstone J., No.8, pp.50-56.

MIZOGUCHI, TOSHIYUKI, (1967), "Consumption functions and saving functions for the Japanese farmers' families in postwar Japan", Rural Economic Problems, Vol.4, No.1, Dec.1967, pp.20-35.

MORGAN REES, A.M. and HOWARD, R.H., (1955), An economic survey of commercial African farming among the Sala of the Mumbwa District of Northern Rhodesia, Lusaka, Govt. Printer, Northern Rhodesia.

MORGAN REES, A.M., (1958), "An economic survey of Plateau Tonga improved farmers", Agric. Bull., No.14, Lusaka, Govt. Printer, Dept. of Agriculture.

MUJUMDAR, N.A., (1968), "The new economic policy - implications for the banking and monetary sectors", in DE GAAY FORTMAN, B., (ed.), After Mulungushi - the economics of Zambian humanism, pp.158-164, Nairobi, E.A. Publishing House.

MYINT, HLA, (1964), "Social flexibility, social discipline and economic growth", Int. soc. Sci. J., Vol.16, No.2, pp.252-260.

MYINT, HLA, (1967), "Economic theory and underdeveloped countries", in MARTIN, K. and KNAPP, J., (eds.), The teaching of development economics, pp.33-52, London, Frank Cass and Co.

MYRDAL, GUNNAR, (1957), Economic theory and underdeveloped regions, London, Gerald Duckworth and Co.

NAIDU, V.T., (1963), "Risk and uncertainty in agriculture in relation to credit", Indian J. agric. Econ., Vol.19, No.1, (Proceedings of 23rd Conference, Bombay), pp.129-132.

NASH, MANNING, (1964), "Capital, saving and credit in a Guatemalan and a Mexican Indian peasant society", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.287-304, London, George Allen and Unwin.

NEUMARK, S.D., (1959), "Some economic development problems of African agriculture", J. Fm Econ., Vol.41, No.1, Feb.1959, pp.43-50.

NEWLYN, W.T., (1961), "'Take off' considered in an African setting", Yorks. Bull. econ. and Soc. Res., Vol.13, No.1, May 1961, pp.19-32.

NEWLYN, W.T., (1967), Money in an African context, Nairobi, Oxford Univ. Press, E. Afr., (Studies in Afr. Economics series).

NICHOLLS, WILLIAM H., (1970), "Development in agrarian economics: the role of the agricultural surplus, population pressures and systems of land tenure", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.296-319, London, Frank Cass and Co.

NURKSE, R., (1953), Problems of capital formation in underdeveloped countries, Oxford, Basil Blackwell.

Office of National Development and Planning, Zambia, (1966), First National Development Plan, 1966-1970, Lusaka, Govt. Printer.

OLIVER, R. and FAGE, J.D., (1966), A short history of Africa, Harmondsworth, Penguin.

OLUWASANMI, H.A. and ALAO, J.A., The role of credit in the transformation of traditional agriculture: the Nigerian experience, mimeo., undated, Nigeria, Univ. of Ibadan.

OTTENBERG, SIMON, (1968), "The development of credit associations in the changing economy of the Afikpo Igbo", Africa, Vol.38, No.3, July 1968, pp.237-252.

PARK, J.H., (1970), "Effects of increasing commercialization on resource use in semi-subsistence farms in South Korea", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.196-208, London, Frank Cass and Co.

PATCH, RICHARD W., (1966), Freedom and development: rural decision making and agricultural development, mimeo. of the Land Tenure Centre, Univ. of Wisconsin.

PENNY, D.H., (1968), "Farm credit policy in the early stages of agricultural development", Australian J. agric. Econ., Vol.12, No.1, June 1968, pp.32-45.

PENNY, D.H., (1970), "Growth of 'economic-mindedness' among small farmers in North Sumatra, Indonesia", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, London, Frank Cass and Co.

PHILLIPS, J., HAMMOND, J., SAMUELS, L.H. and SWYNNERTON, R.J.M., (1962), The development of the economic resources of Southern Rhodesia with particular reference to the role of African agriculture, (Report of the advisory committee), Salisbury.

POLANYI, KARL, (1957), "The economy as an instituted process", in POLANYI, ARENSBERG and PEARSON, (eds.), Trade and markets in the early empires, pp.264-266, Glencoe, Illinois, The Free Press and the Falcon's Wing Press.

PORTER, RICHARD C., (1966), "The promotion of the 'banking habit' and economic development", J. Dev. Stud., Vol.2, No.4, July 1966, pp.346-366.

RAHIM, SYED A., (1970), "The Comilla program in East Pakistan", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.415-424, London, Frank Cass and Co.

RANGA RAO, D.S. and ALLEN, R.M., (1965), A pilot random sample survey on maize production in the Sala Reserve and the area of Chief Mungule in the Central Province of Zambia, 1964-65, mimeo., Lusaka, Ministry of Agriculture.

RIBEIRO, J.P. and WHARTON, C.R., (1970), "The ACAR program in Minas Gerais, Brazil", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.424-438, London, Frank Cass and Co.

RICHARDS, AUDREY I., (1939), Land, labour and diet in Northern Rhodesia, London, Oxford Univ. Press.

RICHARDS, AUDREY I., (1958), "A changing pattern of agriculture in East Africa: the Bemba of Northern Rhodesia", Geogrl J., Vol.124, Part 3, Sep.1958, pp.302-314.

ROBERTS, R.A.J., (1969), "Credit unions: personal and national betterment in Zambia", Report of the Seventh African Conference on the mobilization of local savings, Aug.1969, Ghana, pp.71-74, Madison, Wisconsin, CUNA International.

ROBINSON, H.J. and BAHTA, M., (1969), An agricultural credit program for Ethiopia, Menlo Park, California, Stanford Research Institute.

ROBINSON, JOAN, (1965), The accumulation of capital, London, Macmillan.

ROGERS, EVERETT M., (1969), Modernization among peasants: the impact of communication, New York, Holt, Rinehart and Winston Inc.

ROGERS, EVERETT M., (1970), "Motivations, values and attitudes of subsistence farmers; toward a subculture of peasantry", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.111-135, London, Frank Cass and Co.

ROSTOW, W.W., (1960), The stages of economic growth, London, Cambridge Univ. Press.

ROWLAND, J.N., (1969), "Motivation in emergent communities", Optima, Vol.19, No.2, June 1969, pp.62-68.

ROYER, J., (1959), "Note on rural surveys covering food consumption and household expenditure in Tropical West Africa", F.A.O. Rome, Mon. Bull. agric. Econ. Statist., Vol.8, No.1, Jan.1959, pp.1-6.

RUTHENBERG, H., (ed.), (1968), Smallholder farming and smallholder development in Tanzania, Munich, Weltforum Verlag - Ifo-Institut für Wirtschaftsforschung.

RYAN, JARLE A., (1970), The fertilizer programme in Ethiopia, 1968-1970, mimeo., Addis Ababa, Food and Agriculture Organization/Freedom From Hunger Campaign Fertilizer Programme.

SCHATZ, SAYRE P., (1965), "The capital shortage illusion: government lending in Nigeria", Oxford Economic Papers, Vol.17, No.2, July 1965, pp.309-316.

SCHATZ, SAYRE P., (1968), "The role of capital accumulation in economic development", J. Dev. Stud., Vol.5, No.1, Oct.1968, pp.39-43.

SCHULTZ, T.W., (1953), The economic organization of agriculture, New York, McGraw Hill.

SCHULTZ, T.W., (1961), "U.S. endeavours to assist low income countries improve the economic capabilities of their people", J. Fm Econ., (U.S.A.), Vol.43, No.5, Dec.1961, p.1056.

SCHULTZ, T.W., (1964), Transforming traditional agriculture, New Haven, Yale Univ. Press.

SCHULTZ, T.W., (1970), "New evidence on farmer responses to economic opportunities from the early agrarian history of Western Europe", in WHARTON, C.R., (ed.), Subsistence agriculture and economic development, pp.105-110, London, Frank Cass and Co.

SEERS, DUDLEY, (1967), "Limitations of the special case", reprinted from Bulletin of Univ. of Oxford Institute of Economics and Statistics, May 1963, in MARTIN, K. and KNAPP, J., (eds.), The teaching of development economics, pp.1-27, London, Frank Cass and Co.

SHACKLE, G.L.S., (1955), Uncertainty in economics, London, Cambridge Univ. Press.

SHIVAMAGGI, H.B., (1963), "Provision of credit for small cultivators: reconsideration of the problem", Indian J. agric. Econ., Vol.18, No.3, July/Sep.1963, pp.23-37.

SINGER, H.W., (1970), "Dualism revisited: a new approach to the problems of the dual society in developing countries", J. Dev. Stud., Vol.7, No.1, Oct.1970, pp.60-75.

SMITH, RAYMOND T., (1964), "Ethnic difference and peasant economy in British Guiana", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.305-329, London, George Allen and Unwin.

STEEDS, D., (1967), "Humanism and the agricultural revolution", Mon. Econ. Bull., Ministry of Agric., Lusaka, Nov.1967, pp.33-37.

STREETEN, P., (ed.), (1970), Unfashionable economics: essays in honour of Lord Balogh, London, Weidenfeld and Nicolson.

SWIFT, M.G., (1964), "Capital, saving and credit in a Malay peasant economy", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.133-156, London, George Allen and Unwin.

THOMAS, W.J., (1970), "Evolution or revolution in agricultural development?", J. agric. Econ., Vol.21, No.1, Jan.1970, pp.49-54.

TOPLEY, MARJORIE, (1964), "Capital, saving and credit among indigenous rice farmers and immigrant vegetable farmers in Hong Kong's New Territories", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.157-186, London, George Allen and Unwin.

TURNER, V.W. and E.L.B., (1955), "Money economy among the Mwinilunga Ndembu: a study of some individual cash budgets", Rhodes-Livingstone J., No.18, pp.19-37.

United Nations Food and Agriculture Organization, (1963), Report on the development centre for agricultural credit for Africa, Addis Ababa, 7-17th May, 1962, F.A.O./Expanded Program of Technical Assistance, No.1595, Rome.

United Nations/Food and Agriculture Organization/Economic Commission for Africa, (1964), Report of the economic survey mission on the economic development of Zambia, 1963/64.

United Nations Food and Agriculture Organization,(1964), New approach to agricultural credit, F.A.O. Agricultural Development Paper, No.77, Rome.

United Nations Food and Agriculture Organization, (1965), Agricultural credit through co-operatives and other institutions, F.A.O. agric. Stud., No.68, Rome.

United Nations Food and Agriculture Organization, (1971), F.A.O. Rome. Mon. Bull. agric. Econ. Statist., March 1971.

UPTON, MARTIN, (1967), "Socio-economic survey of some farm families in Nigeria, Part 1", Bull. Rur. econ. and Sociol., Vol.2, No.3, Sep.1967, pp.127-183.

UPTON, MARTIN, (1968a), "Socio-economic survey of some farm families in Nigeria, Part 2", Bull. Rur. econ. and Sociol., Vol.3, No.1, April 1968, pp.7-37.

UPTON, MARTIN, (1968b), "Socio-economic survey of some farm families in Nigeria, Part 3", Bull. Rur. econ. and Sociol., Vol.3, No.2, Oct.1968, pp.149-206.

UPTON, MARTIN, (1969), "Note on tree crops: the capital profile and valuations", J. agric. Econ., Vol.20, No.1, Jan.1969, pp.143-149.

U.S. Agency for International Development, (1970), A new production credit programme for increasing village agriculture in developing countries, Washington, Private development assistance series, Report No.2.

VAN DEN DRIES, J., (1962), Credit union handbook, Dublin, Fallons.

VAN DEN DRIES, J., (1967), Credit union administration, Nairobi, Catholic Relief Services.

VASTHOFF, JOSEF, (1970), "Small farm credit in Kenya", in MARLIN, PETER VON, (ed.), Financial aspects of development in East Africa, pp.259-298, Munich, Weltforum Verlag - Ifo-Institut für Wirtschaftsforschung.

WATSON, W., (1954), "The Kaonde village", Rhodes-Livingstone J., No.15, pp.1-30.

WATSON, W., (1959), Tribal cohesion in a money economy: a study of the Mambwe people of Northern Rhodesia, Manchester Univ. Press.

WHARTON, C.R., (1960), "The economic impact of technical assistance: a Brazilian case-study", J. Fm Econ., Vol.42, No.2, May 1960, pp.252-267.

WHARTON, C.R., (1963), "The economic meaning of subsistence", Malayan Econ. Rev., Vol.8, No.2, pp.46-58.

WHARTON, C.R., (ed.), (1970), Subsistence agriculture and economic development, London, Frank Cass and Co.

WHITE, MATTHEW, (1969), "It's work or go hungry, but the people don't want to know", Rhodesian Sunday Mail, April 27th, 1969, p.15.

WOLF, ERIC R., (1966), Peasants, Englewood Cliffs, New Jersey, Prentice-Hall.

YAMEY, B.S., (1964), "The study of peasant economic systems", in FIRTH, R. and YAMEY, B.S., (eds.), Capital, saving and credit in peasant societies, pp.376-386, London, George Allen and Unwin.

YOTOPOULOS, P.A., (1966), "A micro-analytic approach to the measurement of agricultural capital inputs", in YOTOPOULOS, P.A., (ed.), Economic analysis and economic policy, pp.121-158, Athens, Centre of Planning and Economic Research.

YUDELMAN, M., (1964), Africans on the land, Cambridge, Massachusetts, Harvard Univ. Press.

Zambia National Provident Fund, (1968), Second annual report of the Zambia National Provident Fund Board, Lusaka, Govt. Printer.

ZULU, JUSTIN B., (1968), "Humanism and money in Zambia", in DE GAAY FORTMAN, B., (ed.), After Mulungushi - the economics of Zambian humanism, pp.75-94, Nairobi, E.A. Publishing House.

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