MINOR RESEARCH TASKS AT CADU NO. 3
CREDIT SITUATION IN CHILALO ANRAJA (BASE-LINE STUDY)

by
GORAN BERGMAN AND HÅKAN LINDQVIST
July, 1969
TABLE OF CONTENTS

1 GENERAL BACKGROUND TO THE SURVEY

1.1 THE PROJECT AREA
1.1.1 Some statistical figures
1.1.2 Map of the project area
1.1.3 Agriculture and economy

1.2 CADU:s CREDIT PROGRAMME
1.2.1 The credit programme as part of CADU:s activities
1.2.2 Objectives of the credit programme
1.2.3 How the credit programme works

1.3 EVALUATION
1.3.1 Evaluation of CADU:s activities
1.3.2 Evaluation of the impact of the credit programme on agriculture
1.3.3 Evaluation of the impact on the traditional credit structure
1.3.4 Qualitative or quantitative evaluation

2 THE PURPOSE AND THE LIMITATIONS OF THE SURVEY

2.1 THE PURPOSE OF THE SURVEY
2.2 THE LIMITATIONS OF THE SURVEY
2.2.1 Limitations in time
2.2.2 Geographical limitations
2.2.3 Limitations concerning the population
2.2.4 Limitations to economic conditions for the farmers

3 OUTLINE OF THE SURVEY

3.1 DATA TO BE COLLECTED AND PROCESSED
3.2 METHOD FOR COLLECTING DATA
3.3 DEFINITION OF VARIABLE, ELEMENT, AND PARAMETER
3.4 THE RESULTS FROM TWO PREVIOUS CREDIT SURVEYS
3.4.1 A credit study in Digelu and Yeloma areas
3.4.2 A credit study in Waji Gomas
3.5 THE SAMPLING TECHNIQUE
3.5.1 First stage: Sampling of Gashas
3.5.2 Second stage: Sampling of farmers within the Gashas
3.6 DETERMINING SAMPLE SIZE
3.6.1 Calculating sample size on the basis of desired precision
3.6.2 Calculating sample size on the basis of available time
3.7 THE PILOT STUDY
3.8 PRESENTATION OF QUESTIONNAIRE AND COMMENTS
3.8.1 The questionnaire
3.8.2 Comments

4 CARRYING OUT THE STUDY

4.1 ORGANIZING THE FIELD WORK
4.2 TIME SCHEDULE
4.3 SCHEME FOR THE FIELD WORK
4.4 SPLITTING THE SAMPLE INTO TWO PARTS
4.5 FINAL SAMPLE SIZE
THE RESULTS FROM THE STUDY

5.1 INTRODUCTION TO THE RESULTS
5.2 DATA OBTAINED FROM THE RESPONDENTS
5.3 ESTIMATING PARAMETERS FOR THE WHOLE PROJECT AREA
   5.3.1 Symbols and formula used for the calculations
   5.3.2 Estimating average debt
   5.3.3 Estimating total amount borrowed in the whole area
   5.3.4 Estimating proportion indebted farmers and average debt
   5.3.5 Estimating different characteristics of the single loans
   5.3.6 Comments

5.4 CONCLUSION

6. REFERENCES

APPENDIX: Validity of the answers
1. GENERAL BACKGROUND TO THE SURVEY

1.1. THE PROJECT AREA

1.1.1. Some statistical figures.

The main part of CADU's work for agriculture development is carried out within a part of Chilalo Awraja including the southern part of Dodota Woreda, and the main parts of Hertosa W., Tijo W. and Digelu & Tijo W.. With the exception of Dodota Woreda, the project area is situated on a high plain with an altitude ranging from 1900 to 2900 meters above sealevel.

The following approximate figures concerning the project area have been taken from CADU Statistical Digest 1968:

Total area: ........................................ c. 1 350 km\(^2\) (135 000 ha)
Out of this area 85% has been classified as fertile and the rest as moderate or poor land.
Population: ........................................ c. 110 000 persons
About 50% are under 15 years old.
Population in towns: ................................. c. 18 000 "
Population in the countryside: ....................... c. 92 000 "
Population density: .................................. c. 80/km\(^2\)
Average size of household in the countryside: 6 persons
Total number of households " " : c.15 000

To be noted: The above figures are very uncertain and shall only be used as an approximation.

Out of the c. 92 000 people living in the countryside the majority are working with, or are directly dependent of, agriculture. Tradesmen and artisans are mainly to be found in towns and in market villages.

1.1.2. Map of the project area. (See page 2)

1.1.3 Agriculture and economy.

The agricultural pattern is characterized by small farms scattered all over the area. Usually each farmer cultivates a piece of land - either his own or under tenancy - and breeds cattle at the same time. Specialization is not common.

Crops.

Barley and wheat are the most important crops in the area and are cultivated by 81% and 64% respectively of the farmers. Beans are grown by 48%, peas by 37%, and flax by 34%. Other crops and
vegetables can also be found. Teff, which is very important elsewhere in the country, is not commonly grown due to the high altitude.

The yields per hectar as well as per manhour of work are low, and so is the quality of the harvests. Usually a farm, if not of extraordinary size, does not give more than a small surplus over the elements needs of the people living there.

Cattle.

The number of cattle in the area is very high and the grazing land available is not sufficient to give full nutrition to all the animals. There is also a general shortage of water: in some places the cattle must be taken more than 10 km to drink. For these and other reasons the general condition of the animals is not too good and the yield of milk or meat per animal is low.

<table>
<thead>
<tr>
<th>The average number of different animals per farmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxen</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>2.8</td>
</tr>
<tr>
<td>87</td>
</tr>
</tbody>
</table>

no = average number of that kind of animal among owners
% = percentage of farmers owning that kind of animal

From CADU: General Agricultural Survey of the Project area, July 1968.

Farming methods.

Ploughing.

The tools are simple and not very efficient. The ploughs are made of wood with a tip of iron. These ploughs do not turn the soil - they only make a shallow furrow. It is desirable to plough the fields at least four times before sowing. A pair of oxen is used as draught animals.

Sowing.

The sowing is done as broadcasting: the farmer spreads the seed by hand. As seed they use the grains they have been able to spare from the previous harvest or grains bought at the market. The farmers rarely have access to improved seed or to fertilizers.

Harvesting and threshing.

When harvesting the farmers use small sickles to cut the straw. Then the crop is left to dry before the threshing can
take place. The crop is put together into a heap and cattle are
driven to walk round and round in the heap in order to free the
grains. To separate grains from straw and chaff the crop is thrown
in the air so the wind can do the fanning. The final cleansing is
done by hand.

**Selling, storing and consumption.**

After the threshing a great part of the crop is taken to the
markets to be sold. The farmers generally meet most of their expens­
es at this time of the year: taxes, clothes and old debts shall
be paid for.

For storing at home special basket-like big containers are
being used. They are made of ecalyptus branches and plastered
from the inside with mud or cow dung. They are kept outside the
house and have a thatched roof. Usually an ordinary container can
keep 700 to 1000 kgs of grain. In the highland the loss due to
insects and rats is not very high. (5-10%)

It is common among the small-scale farmers to have saved
less crop than they will consume during the season. This implies
that they will have to get more crops after some months, and, since they generally have very little cash, they will have to
borrow often, at high interest. Generally the loans shall be paid
back after next harvest, which means that they will get the same
problems for the next year's consumption.

**Landownership and tenancy.**

**Percentage of landowners and tenants.**

The exact number of landowners and tenants in the project
area is not known. An estimation in CADU's General Agricultural
Survey (July 1968) indicates 48% landowners and 52% tenants.
But, since the tenants move from place to place a little more
often than the landowners, it is more difficult to get reliable
information about them and they might actually be more than
estimated. There is evidence that there are relatively more
landowners in this area than in other parts of the country.

A very uncertain estimation indicates that the average land­
owner holds 11 hectares of land while the tenants cultivates
3.5 hectares on an average.

**Forms of tenancy.**

Ekol Arash and Siso Arash are the most common forms of tenancy
agreements in the area. The former means that the landowner
supplies oxens, tools and seed. The tenant supplies almost nothing
more than his work - he can do his farming without any capital.
After the harvest the tenant pays back the seed he has borrowed from the land owner. The rest is equally shared between landowner and tenant.

Siso Arash means that the tenant himself owns oxen and tools and that he supplies half of the seed, \( \frac{1}{3} \) of the harvest to the landowner. His surplus is much bigger than in the Ekol Arash.

In some places there is one form called Irbo Arash and in this case the landowner only supplies the land. After harvest he will get only \( \frac{1}{4} \) of the crop. This form is said to be applied when the land is not very fertile. It is not so common in the project area.

There are also tenancy agreements which stipulate that the tenant shall pay a fixed sum - a certain quantity of wheat or another crop - every year for the use of the land. The landowner gets the same amount if the harvest is good or bad. This form - contrat - is not usual.

The two dominating forms of tenancy agreements are not very favourable for the tenants, since he has to pay a great part of the harvest to his landowner. It is not profitable for him to try to improve the productivity when more than half of the extra gain shall be delivered to the owner. The form of tenancy called Contrat gives more inducement to improvements. Furthermore, his legal position is very weak; the owner can tell him to leave with short notice.

**Economic structure of the farming households.**

**Income and expenditure.**

Subsistence economy dominates the economic pattern in the countryside. The supply and the need of money for cash transactions is rather small. The farmers get their money income from selling crops after the harvest, selling a few animals during the year, and sometimes selling homemade handicraft or alcoholic drinks. The money income per year seldom exceeds 200 

Naturally, the cash expenditures are also small. The main posts are crops for consumption and seed, a few cheap farming tools or household implements, clothes for the family (usually a very important item) and coffee, salt, spices, etc. Feasts and other occasions when people come together causes important expenditures.

**Saving and borrowing.**

Generally, expenditures and income are on level and there is not room for any saving of importance among the vast majority
of the farmers. The margin for sudden expenses or investments is very small. When an unexpected need for money comes up, the money must be borrowed.

It is difficult to get credit - there are no banks or other institutions - and very often the borrower has to pay a very high interest or to let the lender use his land. If he can not pay back the loan in time he risks to loose his cattle or his land.

A large proportion of the farmers are indebted in the area, and many of them on the above mentioned, hard conditions.

Conclusion
Agriculture in the area is characterized by traditional methods and means of production. The yields per hectare as well as per man-hour is low. The peasants have not got the necessary knowledge or the economic possibilities to improve their situation. "Given these constraints, the agriculture of an ordinary farmer is not far from optimum." To take away these constraints is an important target for CADU's work.

Improved farming methods, new kind of seeds, fertilizers, insecticides, upgraded cattle and improved marketing are some of the ways to eliminate some of the constraints. If these innovations could be introduced, the output from agriculture would be raised significantly and the economic situation of the people in the area very much improved.

Sources: CADU Publication No B:7, B:22.

1.2. CADU's CREDIT PROGRAMME.

The credit programme is an integral part of CADU's activities.

"The purpose of the proposed activities of CADU is to establish suitable methods of bringing about, when applied in an integrated manner and within a geographically limited framework, agricultural development in Ethiopia and to train staff for such development work.

The project includes agricultural experimentation aimed at producing a reasonable number of innovations, programmes for the transmission of such innovations to the farmers, creation and improvement of marketing facilities for agricultural products, production and/or distribution of inputs (partly on credit)..."

Quoted from CADU stencil: Project Description.
1.2.2 Objectives of the credit programme.

The purpose of the credit programme is partly to promote the introduction of the above mentioned innovations, by giving the farmers the possibilities to buy the new inputs on credit at reasonable costs, and partly to improve directly the economic situation of the borrowers.

The innovations will raise the produce of the individual farms and will pay off very soon. The farmer will find his economic position improved and should not have too big problems to repay the loan in time.

1.2.3 How the credit programme works.

a) Purposes for which credit can be given.

CADU will provide short term credit, repayable within 12 months, and medium term credit, repayable within at most five years. Long term credits, with a duration of more than 5 years, will not be provided by CADU.

Short term credit can be given for the following purposes:

The purchase of improved seed

- " " fertilizers, insecticides etc.
- " " concentrates and other food-stuffs for cattle
- " " poultry of improved breeds
- " " implements and small tools for farming and forestry
- " " services from CADU machinery pool

Medium term credit can be given for the following purposes:

The purchase of improved (upgraded) livestock

- " " draught animals from CADU
- " " farm and forestry implements and machinery
- " " tree seedlings for forest plantation
- " " material for the establishment, repair or improvement of works for the drainage or supply of water for the purpose of farming.

- " " material for the construction, repairing of, or the making of any structural alterations or additions to other farm building than dwellings.

The construction of grain storages

The establishment of co-operatives (co-operative use of machinery in particular).

b) Terms of credit

Only credit in kind will be granted and there is a minimum limit of $ 50. No maximum limit is specified. The borrower must
produce a down-payment amounting to 25-75% of the purchase. The rest can be obtained on credit. This stipulation has the disadvantage that some farmers with little money cannot get as much goods as desired. The gain in security and psychological factors are, however, supporting this stipulation.

The annual credit charge will be around 12%. In some cases it might be stipulated that the repayment shall be made in the same kind as borrowed. Then a certain quantity should be paid back and according to the market prices - the annual interest may vary a little from the 12%.

The following kinds of security will be required.
1. Personal security in the form of two reputable guarantors
2. Compulsory obligation for the borrower to market part of his crop at prevailing market price to CADU or, under certain circumstances, to an agent appointed by CADU (e.g. the Ethiopian Grain Corporation)
3. Durable goods will belong to CADU until fully paid
4. A landowner should be requested to deposit his latest tax receipt on his property with CADU.

c) Who can get credit?

Landowners as well as tenants can get credit from CADU for the above mentioned purposes. For several reasons, however, tenants must fill the following requirements to be eligible for credit:
There must be a written fixed-amount tenancy agreement between him and his landowner, and the latter must be one of the guarantors. This implies that, at present, the vast majority of tenants will stay outside the scope of the credit programme. General rule for eligibility: To obtain credit from CADU a farmer must possess the character, ability and experience necessary to carry out the proposed farm plan so that he will benefit from the credit given.

From CADU stencil: Agricultural Credit Programme

EVALUATION.
1.3.1 Evaluation of CADU:s activities.

CADU:s activities are, during the first years, to some extent experimental in nature. Different methods and approaches to promote agricultural development are being tried. To ensure the best result possible, continuous evaluation is as necessary as careful planning.

In the CADU publication: Plan of Work and Budget 1968/69, Appendix 11 the purpose of evaluation has been expressed as follows: "The purpose of evaluating technical assistance projects can be said to be twofold:
### CHART SHOWING THE CREDIT PROCESS

<table>
<thead>
<tr>
<th>Step</th>
<th>Farmer</th>
<th>Agr.-ext. agent</th>
<th>Head of comm. &amp; ind., dept.</th>
<th>Ex.,director</th>
<th>Admin. section</th>
<th>Foreman mark, store</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit need initiated</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision on suitability</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation of farm plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation of loan application</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommendation for credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan application considered</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision on approval or rejection</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan agreement signed</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td>△</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening of borrower's file</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>△</td>
<td></td>
</tr>
<tr>
<td>Opening of borrower's account</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Down-payment</td>
<td>△</td>
<td>△</td>
<td></td>
<td>△</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery order made out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>△</td>
<td></td>
</tr>
<tr>
<td>Preparation of delivery order</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Supply of inputs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Supervision of credit</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>△</td>
</tr>
<tr>
<td>Reminder of repayment</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>Delivery of crop</td>
<td>△</td>
<td>△</td>
<td></td>
<td>△</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repayment</td>
<td>△</td>
<td>△</td>
<td></td>
<td>△</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up of repayment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Legend:**
- X At farm
- △ At central office
- ○ At trade centre

**CADU stencil:** Agricultural Credit Programme
1. To systematize the experiences in order to create a basis for further planning, either of the same project or of others.
2. To show to the financially interested parties how their money is being used.

The former purpose could be referred to as the managerial purpose, the latter as the political purpose. To be able to answer the managerial purpose, an evaluation should involve two separate functions:

a) to ascertain functional connections between project input and project output;
b) to transform the collected information about input-output connections into steering impulses for project activities.

The evaluation programme of CADU at present only deals with the first of the two functions of evaluation. The second function will be dealt with at considerably later stage of the project work. The information collected should also be sufficient for the political purpose of the evaluation.

1.3.2 Evaluation of the credit programme.

There are several different types of effects of the credit programme that could be evaluated in order to fill the purposes mentioned above. Concerning the general effects on agriculture - one of the most important effects of the credit programme - it is not possible to distinguish between the effects of the credit programme and the effects of the other CADU activities. The credits are given to promote the introduction of different innovations and the impact of the credits on agriculture must be evaluated together with the introduction of new seeds, upgraded cattle, etc.

Effects like sociological changes in the rural society, changes in attitudes towards agriculture, development, CADU, etc. will not be evaluated in this context. Time and other limitations make it necessary to confine this evaluation study to the effects of the programme on the credit situation of the farmers in the area.

1.3.3 Evaluation of the effects on the credit situation of the farmers.

**Summarized picture of the present credit situation.**

From earlier studies we know that the credit situation is difficult for a large percentage of the farmers. Many are indebted and very often they have to pay high interests - sometimes more than 100% annually. In some cases, when a borrower cannot pay back his loans on time, they have to give away their cattle or their land.
to the lender. This means that his possibilities to earn his living
will be sharply reduced.

There is usually no possibility for an ordinary farmer to get
a loan from a bank or other credit institution. The Development
Bank of Ethiopia, for example, gives credit to the agricultural
sector, but its lending has mainly been given to rather big deve­
lopment projects, or to coffee plantations. Out of the 14 million
$ of credits to agriculture in the whole country during the period
1951 - 1965 only 1 1/2 million have been given to small scale
farmers. For these people the following sources remain: 1) loans
from relatives and close friends. When it is possible one tries to
borrow from this group, since the terms of credit usually are softer
than between people who do not know each other. 2) loans from
other farmers, graintraders and money lenders. This category very
often charges high interests when they lend money. 3) In cases
of emergencies such as death in the family or fire, it is sometimes
possible to get a loan, or another form of help, from an "association
for mutual help" among the farmers.

When a farmer want to borrow any large amount of money, for
example to buy a pair of oxen, he usually has to go to "other farmers
or moneylenders" and to pay a high interest. Considering the high
interest and the expected yield of his "investment" he will no
doubt find that many desirable investments will not pay. The present
level of interests can thus be said to hinder development in the
area.

It is not uncommon among the farmers to borrow crops for
consumption or seed just before sowing time. This loan will be paid
back after the following harvest, including a high interest and
thus diminish the crops for the following year. In bad cases the
farmer is in a vicious circle: he will have to continue borrowing
before sowing and paying back after harvest.

**Evaluation of the impact of the credit programme.**

We want to evaluate the effects of the credit programme on the
farmers credit situation, the picture above is very much summarised
and indicates only a few of the characteristics of the present situa­
tion. In order to make the evaluation possible we shall make a
closer study of some of the features of the credit structure: how
many of the farmers that are indebted, size of average debt,
different terms of credit, from the farmers borrow, if there is any
difference between the terms of credit for loans from different
persons, for what purposes the loans are taken, sizes of income and
expenditure of the farmers, size of land, etc. Under point 311, we have made a systematic list of all the points to be studied.

The most suitable approach for making an evaluation of the effects of the credit programme is probably to make "before and after" studies.

The before-measurement should give a picture of the situation when the programme starts and this should be compared to the situation after some time, the length of which can be decided on later. In the ideal case the difference between the two measurements can be attributed to the programme. There is, however, always the risk that other circumstances might have had some unknown impact. Very often, therefore, in this type of studies, one tries to check the unknown factors by using a control area, similar to the one studied. If this method should be reliable one must be sure that the control area really is the equivalent, in all important aspects, of the one studied.

There are two reasons why we decided not to use control area: it is very difficult to find an area with the same characteristics as the one studied and it is probably easier to control the unknown factors in one area than in two different areas, especially when the time period is very long and the chosen area is under continuous observation.

1.3.4 Qualitative or quantitative evaluation?

There are in short two different levels of ambition at which an evaluation of the effects of the credit programme on the credit structure could be made. The first - and lowest level - implies a merely qualitative before-and-after study, while the higher level demands a quantitative evaluation.

Qualitative evaluation.

In a qualitative survey one describes verbally the different aspects of the phenomenon under observation. In this case we should describe the different credit channels, terms of credit, purposes of loans etc. in order to give a picture of the traditional credit structure.

After a period a new, corresponding study should be made. The differences in the credit pattern between the two observations should - in the ideal case - be ascribed to the credit programme.

In a qualitative study it is not possible to establish any fixed relations between used resources and attained results since the changes in volumes are not known. The evaluation can not be complete.
Quantitative evaluation.

To be able to make a good evaluation of the credit programme it is necessary to calculate a measure of effectiveness. The relation between used resources and attained results must be established. This objective demands a quantitative survey before the start of the programme and a corresponding measurement when the programme has been in work for a time.

A quantitative study contains all the aspects of the qualitative study but goes deeper. It shall estimate the volumes flowing through different channels, the number of indebted farmers, the average amount borrowed, etc. It shall give figures for all the aspects under observation.

After the two surveys have been made the collected data shall be compared and the effect of the credit programme can be defined as the change in forms as well as in volumes. It should be possible to find accurate relations between used resources and obtained results and to make a useful evaluation.

For the above reasons we have decided to make a quantitative study of the traditional credit structure at the time when the credit programme has been working for a short time.
2. THE PURPOSE AND THE LIMITATIONS OF THE SURVEY

2.1. THE PURPOSE OF THE SURVEY.

To conclude: The survey shall be a base-line study of the credit structure among the farmers in the project area at the time when the credit programme starts working on a large scale. After a period of about two years another study shall be made. The two studies shall be carried out in such a way as to make a comparison of the results possible. The differences in the credit structure observed shall constitute a small part of the basis for an evaluation of the credit.

2.2. THE LIMITATIONS OF THE SURVEY.

2.2.1. Limitations in time.

The purpose is to describe the credit structure at the time of the survey - in March and April 1969 - and, secondly, during the previous 12 months. Due to the risk of lacking memory of the respondents we cannot extend the time period to more than one year.

2.2.2. Geographical limitations.

The study will be carried out in the project area as defined under point 1.1.1. The extension of the area is shown on the map (1.1.2). No farmers living outside this area shall be interviewed.

2.2.3. Limitations concerning the population.

The population to be studied is made up by farmers living in the countryside of the project area at the time when the survey is carried out. Farmers living in towns and market villages are not within the population and will not be interviewed. This is due to the sampling techniques applied. Furthermore, only those farmers that are responsible for the management and the economy of each farming unit will be interviewed. (These "farm managers" will simply be called farmers in the following). Persons, who do not fall in both of these two categories, will not be interviewed although they might have some influence on the credit situation.
Limitations to economic conditions for the farmers.

There are a large number of different aspects of the credit structure that would be of interest to observe. The limited time and other constraints makes it necessary to confine our study to strictly economic conditions. In point 3.1 we have listed the aspects we want to study.

3

OUTLINE OF THE STUDY

3.1

DATA TO BE COLLECTED AND PROCESSED.

In order to meet the objective of the survey - to give a good picture of the characteristics of the credit structure among the farmers in the project area - the following data must be collected and processed:

A. Sources of credit

a. What different credit sources are used by the farmers?
   (What different relations between borrower and lender can be found?)

b. What is the relative distribution of credit volumes and number of loans from the different sources?

1. What percentage of the loans has been given by:
   I  Relatives
   II  Friends
   III Other farmers than I and II
   IV  Traders, merchants and moneylenders
   V  Different kinds of institutions or organizations

2. What percentage of the credit volumes has been given by the above sources?

B. Terms of credit

a. What different terms of credit can be observed in the area?

1. Interest
   I  Money interest
   II  Interest in kind
   III Interest in the form of work for the lender
   IV  The lender uses the land of the borrower

2. Security
   I  Written contract
   II  Witnesses
   III Guarantors
   IV  Security in land
b.1. What percentage of the loans carry interest?

2. What is the average annual interest?
   I  Per all loans
   II Per loans against interest?

c. What is the average interest (per year) for loans from different sources? (If the material is too small, we will calculate loans from relatives and from friends together, and loans from other farmers, traders and institutions together.)

d. What is the average interest (per year) for cash loans and kind loans respectively?

e. What percentage of the loans have:
   I  Written contract
   II Witnesses
   III Guarantors
   IV Security in land

f. Same as e. but for loans from different sources separately

g. Same as e. but for cash loans and kind loans separately

C. Indebtedness

a. What percentage of
   1. All farmers
   2. Landowners
   3. Tenants

   are indebted at the time for the study?

b. What percentage of
   1. All farmers
   2. Landowners
   3. Tenants

   have been indebted during some time during the last 12 months?

c. How large are the debts of
   1. All farmers
   2. Landowners
   3. Tenants

   at the time for the study:
   I  Average size of loan
   II  Median size of loan
   III Average number of loans
   IV  Average debt
   V   Median debt
VI Average debt per indebted farmer  
VII Median debt per indebted farmer

D. **Cash and kind loans**  
a. Percentage of loans taken, in cash and in kind respectively  
   1. During the 12 months period  
   2. At the time for the study  
b. Percentage of cash and kind loans respectively, that has been fully paid back within the time stipulated when borrowed.  
   (Only the loans that had a stipulated time that was run out at the time for the study will be regarded.)

E. **Purposes of loans**  
a. 1. What percentage of all loans has been taken for productive purposes?  
   2. What is the average size of the loans taken for productive purposes?  
   3. What percentage of the loans has been taken in order to pay for:  
      I Seed  
      II Cattle or other animals  
      III Other productive use in agriculture  
      IV Productive use outside agriculture (such as trading etc)  
b. 1. What percentage of all loans has been taken for not productive purposes?  
   2. What is the average size of the loans taken for not productive purposes?  
   3. What percentage of the loans has been taken in order to pay for:  
      I Household consumption  
      II Clothing  
      III Taxes  
      IV Other expenses, such as feasts, courtcases etc.

F. **The farmers’ lending to others**  
Information about the farmers’ own lending to others, as a complement to the data about their borrowings. (This point is not as important as the others; see explanation under point 3.2).
a. Average number of loans given to others, from
   1. All farmers
   2. Landowners
   3. Tenants

b. Average size of loaned amount (per all farmers and per lending farmers)
   1. All farmers
   2. Landowners
   3. Tenants

c. Average rate of interest (per all loans and per loans against interest).

G. Other economic conditions

Various information about the economic conditions for the farmers with comparisons between landowners and tenants.

(Averages)

a. Size of land owned
b. Size of land cultivated
c. Size of income (12 months period) from different sources
   1. Selling crops
   2. selling animals
   3. trading
   4. work for others
   5. other income
d. Size of expenses (12 months period) for different purposes
   1. buying crops
   2. buying animals
   3. buying clothes
   4. taxes
   5. other expenses such as for feasts, courtcases etc.
e. Size of savings during the period.

3.2 METHOD FOR COLLECTING DATA.

Since there is no official statistics or other written information on the credit structure available, we have to collect the information directly from the field. The survey will be carried out by interviewing a number of farmers, sampled at random from the whole population. We hope that their answers to our questions shall give us the information we want, according to point 3.1 above.
The survey shall be made from the borrowers' side. It is their credit situation that is interesting, since it is to those people CADU will provide a new source of credit. There are other reasons for this as well: It would probably be more difficult to find the lenders than the borrowers, since some of them might live outside the project area or in the towns and market villages, and still have influence on the credit structure in the country side. Another important reason is that the reliability of the answers from lenders would perhaps be rather low: if, for example, a money lender charges a very high interest, he might not want to reveal this fact. Others will probably prefer to conceal the real size of their fortunes and income - afraid that their taxes could be raised.

We will, however, ask our respondents some supplementary questions about their own lending to others. These questions, together with the questions about size of land, income and expenditure etc., shall supplement our picture of their economic conditions. It might also be interesting to compare the terms of interest that the borrowing farmers agree to, with the terms the lending farmers say they charge. If there is a significant difference, we have an indication that the reliability in their answers is not so high.

3.3 DEFINITION OF VARIABLE, ELEMENT, AND PARAMETER

Variable.

The variables of the study are the different characteristics of the credit structure that we try to describe by the use of figures. Under point 3.1. there is an enumeration of the interesting variables.

Element.

The smallest units, that one wants to study, are called elements. In this survey the elements are all the different loans that the farmers have had during the year under study. The elements shall be observed with regard to the variables.

Parameter.

Parameter is the name for the value of all observations of one variable put together in one way or another. Commonly used parameters are average, mean, median, variance, proportions etc and their purpose is to describe the population with
3.4 THE RESULTS FROM TWO PREVIOUS CREDIT SURVEYS.

3.4.1 A credit study in Digelu and Yeloma areas.

The following figures are taken from "A case Study of Peasant Farming in the Digelu and Yeloma Areas, Chilalo Awraja, Ethiopia" by Lars Leander (CADU publ. No. 22, Jan. 1969).

10 farmers were studied during a period of one year. Below are listed all loans amounting to $5 or more and with a duration of 1 month or more, obtained during the year of 1967 among the 10 farmers observed.

<table>
<thead>
<tr>
<th>Size of loan obtained, in cash or in kind</th>
<th>Value in $</th>
<th>Duration of loan: no of months</th>
<th>Annual rate of interest in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 6:00</td>
<td>6:00</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>$ 10:00</td>
<td>10:00</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>$ 10:00</td>
<td>10:00</td>
<td>3</td>
<td>120</td>
</tr>
<tr>
<td>Peas: 50 kg</td>
<td>6:48</td>
<td>3</td>
<td>192</td>
</tr>
<tr>
<td>Barley: 100 kg</td>
<td>12:10</td>
<td>5</td>
<td>84</td>
</tr>
<tr>
<td>$ 30:00</td>
<td>30:00</td>
<td>5</td>
<td>120</td>
</tr>
<tr>
<td>$ 70:00</td>
<td>70:00</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>$ 20:00</td>
<td>20:00</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>$ 50:00</td>
<td>50:00</td>
<td>12</td>
<td>120</td>
</tr>
<tr>
<td>$ 50:00</td>
<td>50:00</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>$ 7:00</td>
<td>7:00</td>
<td>not stipulated</td>
<td>0</td>
</tr>
<tr>
<td>$ 10:00</td>
<td>10:00</td>
<td>&quot; &quot;</td>
<td>0</td>
</tr>
<tr>
<td>$ 19:00</td>
<td>19:00</td>
<td>&quot; &quot;</td>
<td>0</td>
</tr>
<tr>
<td>Barley: 150 kg</td>
<td>18:22</td>
<td>5</td>
<td>128</td>
</tr>
<tr>
<td>Wheat: 100 kg</td>
<td>18:10</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Total 15 loans Total value $336:90 Average duration of loan (in months) if stipulated: 5.3

Average interest: 56%

Total number of loans.................................15
Number of borrowers................................. 7
Number of loans/borrower............................ 2.1
Average size of loan................................. 22:50 $
3.4.2 Average debt/indebted farmer.......................... 48:10 $  
Average debt/all farmers..................................... 33:70 $  
Percentage of loans against interest............... 53%  

The size of the material does not permit any conclusions with regard to the project area as a whole.

A CREDIT STUDY IN WAJI GOLMASA.

In the summer of 1968 Mr Arne Lexander made a study on the credit situation among a number of farmers in Waji Golmasa in the project area. The information has not yet been processed and no result has been published so far. In order to get an idea of the general characteristics of the variables of our survey we have made some calculations from Mr Lexander’s material. We have included all loans amounting to $ 5 or more and with a duration of 1 month or more, or no time stipulated.

Preliminary results from the study:
Total number of farmers interviewed.................. 109  
Number of farmers indebted................................... 29  
Percentage of " .................................. 27%  
Total number of loans........................................... 58  
Number of loans/farmer indebted.............................. 2  

Average debt/all farmers.......................... 10:50 $  
" " /indebted farmers.......................... 40:20 $  
" " / " landowners.......................................... 45:60 $  
" " / " tenants........................................... 33:70 $  
Median debt/indebted farmers........................ 20:00 $  
" " / " landowners.......................................... 17:50 $  
" " / " tenants........................................... 20:00 $  

Pearsonian coefficient of skewness: $S = \frac{\mu_3}{\sigma^3}$; if > 1 positive skewness (tail to the right)
Skewness/indebted farmers.......................... 1.3  
" / " landowners.......................................... 1.1  
" / " tenants........................................... 1.6
Percentage landowners of all farmers..........................53%
" " of indebted farmers..........................55%

Percentage of loans in cash..........................67%
" " in kind..................................33%

Rate of interest (calculated without regard to size of loan or to the length of duration of loan)
Percentage of loans in kind that have any interest........74%
" " in cash " " " ...........59%

Average rate of annual interest/all kind loans .........58%
" " " " " /kind loans with interest..76%
" " " " " /all cash loans...............48%
" " " " " /cash loans with interest..91%

Frequency table: Number of loans in different classes

<table>
<thead>
<tr>
<th>Size of loan</th>
<th>number of loans</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00 - 14:99</td>
<td>33</td>
<td>57%</td>
</tr>
<tr>
<td>15:00 - 29:99</td>
<td>14</td>
<td>24%</td>
</tr>
<tr>
<td>30:00 - 59:99</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>60:00 - 89:99</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>90:00 - (120:00)</td>
<td>2</td>
<td>4%</td>
</tr>
</tbody>
</table>

Some characteristics of loans in kind and cash respectively.

More than 75% of the loans in kind are taken in the months of June or July. At that time of the year, there is often a shortage of grain for seeding and consumption, and many farmers have to borrow grain. Generally, the duration of the loans are about 7 months, and they are to be paid back after the following harvest. Usually, the annual rate of interest amounts to between 60% and 90%. A common case is to pay back 150% of the quantity borrowed after 7 months. Since the price of crops is lower after harvest time, the rate of interest would be around 80% per year.

The cash loans are usually taken in order to meet extra high expenditures, such as buying grain, animals or clothes for the family, or to pay rents for pasture land, taxes, fines etc. Usually, the duration of time is specified (between 5 and 14 months in half of the observed cases) and the most common rate...
of interest is 1 $ per month for every 10 $ borrowed (= 120% annually). When the time for repayment is not specified the rate of interest may be the same as above or, in some cases, the borrower have to give the lender the right to cultivate a part of his land. Probably this "rate of interest" is lower than the 120% mentioned above, but the estimation is very difficult and not reliable. It is, however, obvious that this arrangement may seriously affect the borrowers future earnings.

It is to be noted that more than half of the cash loans are not paid back within the stipulated time. In these cases the borrower might be sued at court and, since he usually has no other assets than his land and his cattle, there is the possibility that he will have his land taken from him.

For both cash and kind loans it is customary to have 1 or 2 guarantors and 1 to 3 witnesses and sometimes a written contract. When a farmer can borrow grain or money from a relative or a close friend he will prefer that, since the rate of interest usually is lower or nonexisting.

3.5 THE SAMPLING TECHNIQUE.

Since there is no list of all the farmers in the area, there is no way to do the sampling directly. We have decided to do a two-stage sampling, although this will create problems for the statistical calculations. In the first stage we have picked out gashas (a gasha is a piece of land with an area of about 40 hectares) and in the second stage we shall choose some of the farmers living in each sampled gasha.

3.5.1 First stage: Sampling of gashas.

There is an official land register listing all the gashas in the project area - a total of 4000. From this list we have drawn every 50:th gasha, starting from a random number between 1 and 50. Altogether we picked 80 gashas. There is no reason to suspect any periodicity in the register, so this method shall not give any bias.

After the sampling we plotted all the gashas, we could find, on a map. 9 gashas turned out to be situated outside the project area and were cancelled. Out of the remaining 71 gashas 13 were not possible to find, in spite of thorough investigation at woreda offices.
Probably there is no reason to believe that the missing gashas should - in any significant way - differ from the rest. They were evenly spread in the register, and they should be so on the map too. Altogether we had 58 gashas from which we could sample farmers.

3.5.2 Second stage: Sampling of farmers within the gashas.

The sampling of farmers within each gasha is a simple procedure: When we have found one of the sampled gashas it is only to make a list of all the active farmers living within that gasha and to pick at random a certain number or a certain fraction from the list.

3.6 Determining sample size.

3.6.1 Calculating sample sizes on the basis of desired precisions in estimates.

When estimating the different parameters of interest, we want, if possible, a precision of ± 10% (d=0.1) with a maximum risk of error of 5% (alpha = 0.05). This means that we can know with a certainty of 95% that our estimate of a mean or a proportion does not deviate more than 10% from the true value for the whole population.

The following calculations of sample sizes are based on figures taken from Lexander's study.

1) How big should the sample be when estimating the average debt per farmer with the precision and risk for error mentioned above:

\[ \alpha = 0.05 \]
\[ d = 0.1 \]
\[ X = 20 \]
\[ s = 23 \]
\[ \frac{s}{X} = 1.2 \]

Formula to be used: \[ n = \left( \frac{t \cdot \frac{s}{X}}{d} \right)^2 \]

\[ t = 1.96 \]

\[ n = \left( \frac{2 \cdot 1.2}{0.1} \right)^2 \]

\[ n = 576 \]

2) The same calculation but lower precision: \[ d = 0.2 \]

\[ n = \left( \frac{2 \cdot 1.2}{0.2} \right)^2 \]

\[ n = 144 \]

This sample size might be possible to attain but the precision in estimates is not better than +/- 20%
3) How big sample size shall be taken when estimating the proportion of the farmers that are indebted. Lexander's study indicates this proportion to be around 30%.

\[ \alpha = 0.05 \]
\[ d = 0.1 \]
\[ P = 0.3 \]
\[ Q = 0.7 \]

Formula to be used:

\[ n = \frac{t^2 P \cdot Q}{d^2} \]

\[ n = \frac{4 \cdot 0.3 \cdot 0.7}{0.01} = 84; \]

4) The same calculation as 3) but with the assumption that the proportion to be estimated is higher: \( P = 0.5 \)

\[ n = \frac{4 \cdot 0.5 \cdot 0.5}{0.01} = 100; \]

This is definitely an attainable sample size.

5) Estimating different proportions among the loans as percentage of all loans taken: for example the proportion of the loans that have been taken for productive purpose. We may assume that some of the proportions we want to estimate are around 50%. If 40% of the farmers have 2 loans each on an average this implies that

\[ \frac{100}{0.4 \cdot 2} = 125 \]

farmers must be interviewed.

Calculating sample size on the basis of available time.

We can not possibly spend more than 30 days - at a maximum - doing the field work. Out of these 30 days 10 must probably be reserved for second and third visits to farmers not found at home at the first visit, and for other unanticipated work. 20 days remain for the work of finding the gashas and making the interviews.

It will probably take us about three hours - on an average - to find a sampled gasha and another 1/2 hour for the introduction of ourselves and our survey. If every interview takes about 1/2 hour, 2 gashas will be the maximum number to be visited per day. In 20 days we should be able to finish around 40 gashas.

From previous studies we have estimated the number of families in each gasha to 6. Since almost all of them are living on agriculture, there should be the same number of farmers.

The number of farmers to be interviewed in each gasha.

To find the optimal fraction of the farmers to interview in each gasha we made the following calculations, applying a
formula found in Cochran: "Sampling Techniques" page 280:

$$m_{opt} = \frac{S_2^2}{S_1^2 - \frac{S_2^2}{M}} \cdot \sqrt{\frac{C_1}{C_2}}$$

$m_{opt}$ = The optimal number to be picked from each sampled gasha

$S_1$ = The standard deviation within the gasha

$S_2$ = The standard deviation between the gashas

$M$ = The average number of farmers in each gasha

$C_1$ = The cost (in hours) of finding and visiting one gasha

$C_2$ = The cost of interviewing one farmer when gasha is found

We have not been able to estimate the specific standard deviation within the gashas and between the gashas respectively so we have based our calculations on some assumptions:

$S_1$ = The standard deviation within the gashas (when estimating the average = mean indebtedness among the farmers) is assumed to be of the same size as the one estimated from the figures in Lexander's study. $S_1 = 23$

$S_2$ = the standard deviation between the gashas: We have made two different assumptions about $S_2$: 1) $S_2$ is about the same as $S_1$, that is, $S_2 = 23$. 2) $S_2$ is higher than $S_1$ for example $S_2 = 30$.

In the same manner we have made different assumptions about the costs (in time) $C_1$ and $C_2$:

$C_1$ (max) = 3.5 hours  \hspace{1cm} C_2$ (max) = 0.5 hours

$C_1$ (min) = 2.5 hours  \hspace{1cm} C_2$ (min) = 0.25 hours

$M$ is estimated, as mentioned above, to be 6.

Since we do not know the "true" values for all the parameters, we made two different calculations: one "maximum alternative" (that will give a very high fraction to be picked from each gasha), and one "minimum alternative" (giving a low fraction):

$$m_{opt} (\text{max}) = \frac{25}{23^2 - 30^2} \cdot \sqrt{\frac{3.5}{0.25}} \cdot \sqrt{\frac{2.5}{0.15}} = L_{1.5}$$

$$m_{opt} (\text{min}) = \frac{30^2}{30^2 - 30^2} \cdot \sqrt{\frac{2.5}{0.15}} \cdot \sqrt{\frac{2.5}{0.15}} = L_{1.6}$$
Probably the optimal number to be interviewed in each gasha lies between 1.6 and 4.5. We decided to pick 3 farmers per gasha and, since there are 6 farmers on an average, this means a fraction of 50%. Every second farmer shall be interviewed.

If we visit 40 gashas, as mentioned above, we should get 120 interviews. That is not so far from 125 that is desired for estimating different proportions among the loans, as calculated under point 4.5.1 above.

3.7 The pilot study

Purpose

Since the two credit studies had already been made there was no need for more than a minor pilot study with the following purposes:

1/ To indicate what sort of problems we might meet with and how much time it would take to find the gashas and to make the interviews.

2/ To test our questionnaires.

3/ To train ourselves for the interviews.

Findings from the pilot study

We spent two days making the pilot study and interviewed ten farmers in five different gashas. These gashas were not among those sampled for the final study.

There was no indication that our estimation of the time it would take to find the gashas and to make the interviews was wrong, so we decided to rely on the calculations above. Neither did we meet with any significant problems such as refusals to answering our questions.

A few of our questions were evidently difficult to understand so they had to be reformulated. Others showed to be of no use since they gave no valuable information for the study. These questions were cancelled from the final questionnaire. Some other minor changes were also made.

The training of ourselves was valuable, especially with regard to introduce ourselves to the farmers.
3.8 QUESTIONNAIRE ON CREDIT AND COMMENTS

3.8.1 QUESTIONNAIRE ON CREDIT

DATE: ............ TIME: ............ INTERVIEWER/INTERPRETOR: ............

GASHA CODE NO: ............
NAME OF GASHA LEADER: ............
NUMBER OF FARMERS' HOUSEHOLDS WITHIN THE GASHA, Estimated by gashaleader/other farmer/interviewer: ............

NAME OF INFORMANT: ............
LANDOWNER/TENANT

If landowner: SIZE OF OWNED LAND WITHIN THE GASHA: ............ TIMADS
SIZE OF AREA CULTIVATED DURING THE LAST TWELVE MONTHS BY HIMSELF AND HIS HOUSEHOLD WITHIN GASHA: ............ TIMADS
SIZE OF AREA CULTIVATED DURING THE LAST TWELVE MONTHS OUTSIDE GASHA: ............ TIMADS

NUMBER OF HOUSEHOLD MEMBERS: ............ MORE THAN 15 YEARS
............ LESS THAN 15 YEARS

Questions on credit situation

1.1 ARE YOU INDEBTED AT THE PRESENT MOMENT (underline alternatives) ............ YES/NO ............ IN KIND/IN CASH

1.2 FROM HOW MANY DIFFERENT PERSONS HAVE YOU BORROWED: ............ 0, 1, 2, 3

1.3 HOW MUCH HAVE YOU BORROWED FROM EACH PERSON (use reference numbers to identify each loan in the following questions): 1/............ 2/............ 3/............

1.4. THE PERSON(S) YOU BORROWED FROM IS HE (ARE THEY) a) RELATIVE ............
b) FRIEND ............
(only tenants) c) YOUR L.O. ............
(if not a, b, c) d) FARMER ............


1.5 FOR WHAT PURPOSE DID YOU BORROW (item/value) (item/value) (item/value)
   a) SEED ........................................../..... ...../..... ...../.....
   b) CATTLE, HENS......................................./..... ...../..... ...../.....
   c) CONSUMPTION ......................................./..... ...../..... ...../.....
   d) CLOTHES ........................................../..... ...../..... ...../.....
   e) OTHER (specify) ................................/..... ...../..... ...../.....

1.6 WHEN DID YOU BORROW (each loan separately) ...........................................

1.7 a) ACCORDING TO THE ORIGINAL AGREEMENT, WHEN WAS THE LOAN TO BE PAID BACK ......... 1/..... 2/..... 3/.....
   b) IF YOU DID NOT PAY IT BACK
      WHEN ARE YOU TO PAY IT BACK ...........................................
   c) WHAT WILL HAPPEN IF YOU CANNOT PAY IT BACK
      I) PROLONGATION OF TIME POSSIBLE ...........................................
         AT NO INTEREST .....................................................................
         AT SAME INTEREST ..................................................................
         AT EXTRA HIGH INTEREST ..........................................................
         (specify level of interest)
      II) IF PROLONGATION OF TIME IS NOT POSSIBLE, WHAT DO YOU THINK WILL HAPPEN ...........................................

1.8 WHAT ARE THE TERMS OF AGREEMENT:
   a) HOW MUCH WAS THE ORIGINAL LOAN AND HOW MUCH ARE YOU TO PAY BACK. ................ ...........................................
      (OR, WHAT IS THE INTEREST)
      (OBS. the period of time ........./..... ........./..... ........./.....
   b) WRITTEN CONTRACT OR ...........................................
      VERBAL AGREEMENT ...........................................
   c) NUMBER OF WITNESSES .... 0, 1, 2, 3 0, 1, 2, 3 0, 1, 2, 3
   d) NUMBER OF GUARANTORS 0, 1, 2, 3 0, 1, 2, 3 0, 1, 2, 3

2.1 DURING THE LAST 12 MONTHS, DID YOU PAY ANY LOANS BACK ................. YES/NO IN KIND/IN CASH
   b) DID YOU BORROW ANYTHING FOR THE SOWING SEASON WHICH YOU PAID BACK AFTER THE HARVEST ................ YES/NO IN KIND/IN CASH
(If YES answer the questions 2.2 - 2.8 shall be asked)

2.2 FROM HOW MANY DIFFERENT PERSONS DID YOU BORROW .......... 1, 2, 3

2.3 HOW MUCH FROM EACH PERSON .......... 1/...... 2/...... 3/......

2.4 THE PERSON YOU BORROWED FROM, IS HE
   a) RELATIVE ....... ....... .......
   b) FRIEND ....... ....... .......
   (only tenants) c) YOUR L.O. ....... ....... .......
   (if not a, b, c) d) FARMER ....... ....... .......
   (other, specify) e) ....... ....... .......

2.5 FOR WHAT PURPOSE DID YOU BORROW (item/value) (item/value) (item/value)
   a) SEED............. ......../...... ......../...... ......../......
   b) CATTLE, HENS............. ......../...... ......../...... ......../......
   c) CONSUMPTION............. ......../...... ......../...... ......../......
   d) CLOTHES............. ......../...... ......../...... ......../......
   (other, spec) e) ............. ......../...... ......../...... ......../......

2.6 WHEN DID YOU BORROW .......... ............. ............. .............

2.7 WHEN DID YOU PAY BACK .......... ............. ............. .............

2.8 WHAT WERE THE TERMS OF AGREEMENT:
   a) HOW MUCH WAS THE ORIGINAL LOAN............. ............. .............

AND HOW MUCH DID YOU PAY BACK
   (or, if known, the interest) ............. ............. .............

b) WRITTEN CONTRACT OR ............. ............. .............
VERBAL AGREEMENT ............. ............. .............

c) WITNESSES ............. 0 1 2 3 0 1 2 3 0 1 2 3
GUARANTORS ............. 0 1 2 3 0 1 2 3 0 1 2 3

3.1 DURING THE LAST 12 MONTHS DID YOU YES/NO ITEM VALUE £
   a) BUY SEED............. ......../...... ............. .............
   TOOLS............. ......../...... ............. .............
   CATTLE, HENS............. ......../...... ............. .............
   CLOTHES............. ......../...... ............. .............
   FOOD............. ......../...... ............. .............
   b) PAY TAX............. ......../...... ............. .............
   c) HAVE ANY FEAST OR OTHER EXTRA EXPENDITURE............. ......../......
3.2 (IF ANY POSITIVE ANSWER TO QUESTION 3.1 AND VALUE MORE THAN 10 %:

HOW DID YOU GET THE MONEY FOR THAT EXPENDITURE. ........................................
(If loan go back and check questions 1.1 and 2.1)

4.1 DURING THE LAST 12 MONTHS, DID YOU LEND ANYTHING OUT TO ANYBODY. . . . YES/NO IN KIND/ IN CASH (if yes)

4.2 TO HOW MANY DIFFERENT PERSONS 0 1 2 3

4.3 HOW MUCH TO EACH PERSON 1) ........ 2) ........ 3) ........

4.4 THE PERSONS YOU LENT TO, ARE THEY
a) RELATIVE. . . .... .... ....
   (only LO)
   b) FRIEND. . . .... .... ....
   (not a b c)
   c) YOUR TENANT. . .... .... ....
   (other)
   d) FARMER . . .... .... ....
   (other) e) .............

4.5 FOR WHAT DID HE BORROW ITEM VALUE ITEM VALUE ITEM VALUE
a) SEED. . . ............. ............. .............
   b) CATTLE, HENS ............. ............. .............
   c) CONSUMPTION. ............. ............. .............
   d) CLOTHES. . ............. ............. .............
   (other) e) ............. ............. .............

4.6 WHEN DID YOU LEND OUT. . . ............. ............. .............

4.7 WHEN WAS IT TO BE PAID BACK ............. ............. .............

4.8 WHAT WAS THE TERMS OF AGREEMENT:
   a) WHAT WAS THE AMOUNT LENT OUT ........................................
       AND HOW MUCH WAS YOU TO HAVE BACK. (WHAT WAS THE INTEREST). ............. ............. .............
   b) WRITTEN CONTRACT OR. ........ .... .... ....
       VERBAL AGREEMENT ..................
   c) WITNESSES. ............. 0 1 2 3 0 1 2 3 0 1 2 3
   d) GUARANTORS. ............. 0 1 2 3 0 1 2 3 0 1 2 3

COMMENTS:

CORRECTED .............
Comments on the questionnaire.

The first (unnumbered) group of questions shall fill the double purpose of describing the farmer's background variables and of making a "softer" start of the interview than would be the case if we started directly with the questions about debts.

1.1 - 1.8: Questions concerning the present credit situation. Each loan must be noted separately: every loan is an individual unit and shall be studied separately. Reference numbers shall be used to identify each loan. Only the debts at the present moment shall be noted here.

2.1 - 2.8: This group concerns the debts that have been paid back during the last 12 months. The questions are practically the same as 1.1 - 1.8 and shall be asked in the same way.

3.1-3.2: Concerns expenditure and income during the last 12 months. Of special interest is to see how much has been spent for productive purposes and how much for consumption, respectively. The expenditures shall also be compared to the respondent's income. If the expenses exceed the income, the interviewer shall ask how the difference was financed. This is a way to control the information given about loans taken and repaid.

4.1 - 4.8: Concerns the lending from the respondent to others. For several reasons - see chapter 3 point 2: Method for collecting data - there is good reason to suspect that the answers to these questions will be less reliable than the information about debts. These questions shall complement the questions 1.1 - 3.2.

If there are any extraordinary circumstances that might be of importance for the economic situation of the farmer, these should be investigated and noted at the last point in the questionnaire: "Comments". Such circumstances might be: involvement in land disputes or court cases, illness or death in the family, theft of property, very bad harvests, buying or selling of land, moving from one place to another or important changes.

Furthermore, if - in any case - the interviewer suspects that the answers are not reliable, he shall write down his opinion here.

CARRYING OUT THE STUDY.

ORGANIZING THE FIELD WORK.

We were four persons carrying out the study: two Swedish students and two Ethiopian CADU employees. During the first
two weeks of the field work we (the students) should make the introductions and the interviews in English and our interpreters should translate in both directions. Our thought was to let the CADU employees take over the interviewing themselves as soon as we had found the best routines for the work.

Since we had got only one car at our disposal and since all farmers had to be visited by car, we had to go all four of us together to the same gashas. For the first two weeks this was very good - we worked out the routines together. At a later stage, however, it would have saved time if we could split up and go two by two to different gashas.

**TIME SCHEDULE.**

As mentioned above (3.6.2) we could spend 30 days for the field work, reserving 10 days for unforeseen work:

March 10th - March 31st: Finding of sampled gashas and first visits with interviews of farmers found.

April 1st - April 10th: Second and third visits to farmers not found at home at the first visit. During this period our interpreters should do the field work themselves, if possible, and we should do some calculations on the data received, in order to check if our preliminary sample size is large enough, as well as other desk work.

April 11th - April 20th: Reserve time. We should try to get the last remaining farmers (if any) and do other unforeseen work. If the preliminary sample size is too small we must sample more gashas. If necessary, and if possible, we should go all four of us in two different cars, to visit the remaining farmers.

**SCHEME FOR THE FIELD WORK.**

1. **Finding the sampled gasha.**

   In the cases when we did not know where the gashas were located we had to visit the office for the Woreda in which we suspected the gasha to be. Usually it was possible to find someone there who could show us the way. In other cases we got help from CADU extension agents or from farmers.

2. **Talking to the gasha leader.**

   When we had found a gasha we started our work by visiting the gasha leader or, if he was not present, the most respected farmer in the gasha. After introducing ourselves and explaining the purpose of our visit, we asked him for his "permission"
to interview the farmers. In almost all cases this was no problem, and the gasha leaders usually helped us by introducing to the farmers.

3. Finding out the number of farmers and choosing respondents.

To find out the number of farmers living on the gasha we asked the gasha leader to point out the boundaries of the gasha and all the houses within these boundaries. We also asked for all the names of "heads of household" living there, and asked if anyone mentioned was not a farmer. Great care was taken to ensure that we got the right number of farmers.

When we knew the number and the names we picked 50% of the farmers at random (by drawing sticks).

4. Interviewing.

After this procedure (laughed at by the many people that had gathered round us by that time) we started to interview the chosen farmers. We carefully explained our purpose and the questions, so that the farmers should understand and give correct answers. When there was the slightest reason to suspect that an answer was wrong, we checked carefully and reformulated the question after a while, to see if we should get the same answer. When an interview was finished we made a quick control of the answers on the spot. If, for example, the answers revealed that a farmer's expenditures had been larger than his income, we had to check how he got money to make up the difference.

5. Farmers not being at home.

When a sampled farmer was not found at home, we tried to find out where he was, when he was expected to come back or where we could meet him. When possible, we tried to make an appointment with him through one of his relatives or neighbours. We had several appointments at marketplaces.

In order to minimize the loss in our sample, we decided to try at least three times to find every farmer. Previous studies had indicated that the loss due to refusals would be rather small, if any at all.

4.4 Splitting the sample into two parts.

In order to check if our preliminary sample size - calculated on the basis of estimates from the two previous credit studies (see point 3.4 and 3.5) - was approximate, we had decided to split our sample into two parts.
SOME REFLEXIONS AROUND THE CREDIT SITUATION IN THE PROJECT AREA

1. A FEW CRITICAL DATA
   a) Generally, it is very difficult to borrow money: even for a small amount the needing farmer have to turn to many people.
   b) There is no bank or other institution where the ordinary small scale farmers can get credit at a reasonable cost.
   c) Only two main sources of credit are open to the peasants: relatives/close friends and other farmers.
   d) 36% of the loans from relatives/friends carried interest, while close to 90% of the loans from other farmers carried an average interest of 110% per year.
   e) Almost 40% of the interviewed farmers were, at the time for the study, indebted.
   f) Their average debt amounted to $130.
   g) Their average for the credit was, around 70% per annum, or in dollars: $90.
   h) The standard rate of interest for cash loans is $1 per borrowed $10 every month = 120% p.a.
   i) The average cash income per interviewed farmer was $300.

2. SOME ECONOMIC CONSEQUENCES OF THE SITUATION
   a) A sharp reduce of the income of the indebted average farmer: his cash income is around $300 and he has to pay $90 as interest for his loans, that is not far from one third.
   b) His possibilities for saving and consequently, investments is diminished.
   c) To borrow money for investment, even if it was possible, would very seldom be profitable if the rate of interest is 120%.
   d) The indebted farmer might enter the vicious circle of increasing debts, in many cases the farmers have to borrow grain for seed or household consumption in the sowing season the time of the year when many farmers have a shortage of grain. In most cases they will have to pay back between 50 and 100% more than they borrowed. This means that they must put aside a large quantity of their coming harvest for the repayment of old debts. If the following harvest is not an unusually good one, the borrowing farmer will face, later on, the need to borrow more grain than the previous year.
   e) The credit structure is increasing the income gap between the small scale farmers and the better-off farmers. This conclusion can safely be drawn if we assume that the small scale farmers have very little money put aside and that they, consequently, have to borrow the money usually against high interest when the need arises. A well-to-do farmer, who has some money saved, can lend this out against interest.
f) The borrowing farmer may lose his independence. There is reason to believe that some farmers are lending out money against a rather low interest with the purpose of acquiring more land: if the borrower does not settle his debt on request he can be taken to court and there he might be forced to give away a piece of his land to the lender.

In other cases the lender might take the oxen from the borrower, or he might get the right to use the borrower's land until the debt is settled.

These are only a few of the main problems inherent in a credit structure of the kind prevailing in the CADU project area as well as in other traditional agricultural societies.

3. SOME CADU OBJECTIVES WITH SPECIAL REFERENCE TO THE CREDIT SITUATION

In the Tentative CADU programme 1970 - 75 it is said that "the economic development achievements should be measured in terms of change of the:

- Per capita income
- Income distribution
- Propensity to invest
- Production structure"

it is also said that there shall be a "long run development of peasant agriculture". (page 16).

No doubt the present credit situation is a hindrance to the achievement of some of the above mentioned goals, for example: an even income distribution (see point 2 e above), the propensity to invest (see point 2b and c), and the development of peasant agriculture (point 2 a - f).

If the prevailing credit structure could be broken it would be an important step towards the achievement of an more even income distribution and a considerable economic improvement for the small scale farming in general.

4. THE IMPACT OF CADU's CREDIT PROGRAMME

The purpose of the credit programme is to enable the farmers to buy at least partly on credit seed and fertilizer (and, later on, some implements) from CADU, and thus to speed up the introduction of these inputs.

It is not an objective by itself to improve the general credit situation for the peasants, for example by acting as a credit institution:

a) CADU is not giving any credit apart from the selling of supplies.

b) The need of money for different purposes and seed for household consumption can not be met by credit from CADU.

c) There is a stipulation about a down payment of 25 to 50% of the cost for the seed and fertilizer bought. The really poor farmers cannot afford this payment.

d) Most of the tenants do not have access to the credit when buying seed or fertilizer - a very large group is excluded from the programme. However, from 1970 and on the following changes in the credit programme shall be tried:

1. The tenants shall be incorporated through voluntary agreements with the land lords. (Awaiting the situation after the land reform).
2. When considering the applications for credit, priority shall be given to small scale peasants. No credit shall be granted to large scale farmers.

3. Farmers with a bad debt situation shall be accepted for credit, but more security will be needed. It shall be possible to reduce the down payment for these farmers.

4. After the harvest time CADU will accept "savings deposits" against bank interest as a sort of "down payment in advance". This will give the farmers a possibility to save money.

Taken together these changes will probably have some favourable impact on the credit situation, but there will remain a great need for a cheap source of general credit to the farmers.
The preliminary sample size was 40 gashas (giving about 120 interviews) and they should be drawn at random from our list of 58 gashas. Instead of taking 40 gashas directly, we started by taking 30 gashas (every second from our list, plus 1 taken at random) and doing the interviews in these gashas. Then we did some summarized calculations of standard deviation, variances, averages etc, for the different variables to be estimated, and check if they correspond with the values from the preliminary calculations.

If the correspondence is good, we may take the next part of the originally calculated sample size (40 gashas), (every third of the remaining 28 plus 1 taken at random, altogether 10 gashas), but if our new calculations give, for example, a larger variance, we have to take a larger sample size, in order to maintain the desired precision in estimates.

**FINAL SAMPLE SIZE.**

When we had visited all the 30 gashas included in the first part of the sample, we had got 85 interviews altogether. This is only 5 (5.5%) less than the originally estimated 90 interviews. Calculating the different parameters we found no reason to change the original sample size of 40 gashas. Altogether we would probably get around 110 interviews.
THE RESULTS FROM THE STUDY

5.1 INTRODUCTION TO THE RESULTS

Altogether we visited 42 gashas and interviewed 109 farmers. We had originally expected to interview between 110 and 120 farmers, but no less than 5 gashas were found completely empty for different reasons: One farmer owned as much as 10 gashas of land and he let no one live on the gasha that we had sampled. In one gasha there were only non-farmers living and, in another "the soil were so fertile that the farmers owning it preferred to have their living houses outside the gasha. One gasha was empty because the inhabitants had moved down to the lowlands.

Out of the 109 farmers interviewed 45 were landowners (LO:s) and 64 were tenants (T:s).

Only loans with a value of 5₸ or more and with a period of duration of at least one month were noted. Altogether the 109 farmers had 111 loans during the period of twelve months.

Loss

The total loss amount to 5-8 farmers, whom we could not find, in spite of several repeated visits. Only in one gasha we were not allowed to do any interviews: the gasha leader was not at home during the time for the study and his brother would not let us speak to the farmers without his consent. We had no other refusals.

Since the loss is so small, it will not seriously affect the result of the study.

Reliability

Untrue answers from the respondents or lacking memory are the only two sources for bad reliability in this study. We believe that some of the farmers lied about the rate of
interest for their own lending to others, because there was a big difference between these rates and the ones applied for the loans they had taken (see point 5.2:F). On the whole we believe that the farmers gave true answers, especially about their borrowing.

Since the farmers seldom have anything written down it is obvious that they must forget some of their minor transactions during a 12 months period. We found, for example, that their income exceeded their expenditures by a rather large amount (see point 5.2: G), and we know that the rate of saving is rather low among the farmers. It is easier to remember income than a lot of small outlays.

We think that the farmers well remember their loans given and taken during the year and, on the whole, it is our opinion that the reliability is good.

Presentation of the results.

The data obtained from the study will be presented in the same order and under the same signs (A, B, etc) as the 'Data to be collected and processed" under point 3.1.

5.2 DATA ABOUT THE RESPONDENTS

A. Sources of credit

1. Relatives of the credit takers
2. Friends
3. Other farmers than the ones mentioned above
4. Traders of grain and other goods and "professional" moneylenders. Often it is not possible to draw a clear line between moneylenders and farmers. We have asked the respondents if the lender could be called moneylender, that is, if he had much money lent out to other people against interest. If the respondent said that it was definitively so, we classified the lender as "money lender".
5. Organizations. No banks or credit institutions had given any loans to the farmers interviewed. One farmer had a loan of 5 $ from a small "association" for mutual help among the farmers.
b) Relative distribution of credit volumes and number of loans

**TABLE A1:** Sources of credit taken by the interviewed farmers

<table>
<thead>
<tr>
<th>Different credit sources</th>
<th>Volumes</th>
<th>Percentage of total volume</th>
<th>Number of total number of loans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eth. $</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relatives</td>
<td>1.866</td>
<td>29.3</td>
<td>35</td>
</tr>
<tr>
<td>Friends</td>
<td>350</td>
<td>5.5</td>
<td>14</td>
</tr>
<tr>
<td>Other farmers</td>
<td>3.421</td>
<td>53.8</td>
<td>54</td>
</tr>
<tr>
<td>Traders and money lenders</td>
<td>720</td>
<td>11.3</td>
<td>6</td>
</tr>
<tr>
<td>Organizations</td>
<td>5</td>
<td>0.1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6.362</td>
<td>100.0</td>
<td>111</td>
</tr>
</tbody>
</table>

Table A2: Cross tabulation: Cash loans/kind loans and loans from relatives—friends/other farmers

<table>
<thead>
<tr>
<th>Lender</th>
<th>Cash loans</th>
<th>Kind loans</th>
<th>All loans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of loans</td>
<td>Volumes</td>
<td>Average size loans</td>
</tr>
<tr>
<td>Relatives friends</td>
<td>33</td>
<td>1.962</td>
<td>59.5</td>
</tr>
<tr>
<td>Other lenders</td>
<td>37</td>
<td>3.795</td>
<td>102.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>70</td>
<td>5.757</td>
<td>82.2</td>
</tr>
</tbody>
</table>

B. Terms of credit

a) Rate of interest.
   The following types of interest were observed:
   I Money interest (a fixed sum for a certain period: x $ per month)
   II Interest in kind (usually the same kind as the loan)
   III The borrower does some work for the lender
   IV The lender may use a piece of the borrower's land
   V No interest at all

In the following table we present the number of loans with different types of interest for the following categories: loans from relatives and friend or other lenders and cash loans or kind loans respectively. We have also calculated the percentage of the number of loans in each category that carry a certain type of interest.

To be noted: The fact that the loans are of different sizes and have different length of duration has not been regarded.
Table B. 1: Loans with different types of interests.

<table>
<thead>
<tr>
<th>Type of interest</th>
<th>Loans from relatives and friends</th>
<th>Cash loans kind loans</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no.</td>
<td>%</td>
<td>no.</td>
</tr>
<tr>
<td>I Money int.</td>
<td>8</td>
<td>16.0</td>
<td>25</td>
</tr>
<tr>
<td>II Int. in kind</td>
<td>8</td>
<td>16.0</td>
<td>15</td>
</tr>
<tr>
<td>III Work for lender</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>IV Lender uses land</td>
<td>2</td>
<td>4.0</td>
<td>8</td>
</tr>
<tr>
<td>Totals interest</td>
<td>18</td>
<td>36</td>
<td>54</td>
</tr>
<tr>
<td>V No interest</td>
<td>32</td>
<td>64</td>
<td>7</td>
</tr>
<tr>
<td>Total: all loans</td>
<td>50</td>
<td>100.0</td>
<td>61</td>
</tr>
</tbody>
</table>

To be noted: In a few cases kind loans are said to carry interest although the same quantity as borrowed is paid back. This is due to the fact that there has been a price raise. (Usually the prices are higher when the crops are borrowed - before sowing time - then after the harvests when the loans are paid back).

It’s interesting to note that 64% of the loans from relatives and friends are free from interest, compared with 11.5% from "others".

Average interest for loans from relatives - friends and for cash and kind loans respectively.

To be noted: for 10 loans (all cash, 2 from relatives - friends and 8 from others) the rate of interest can not be calculated because the lender have the right to use the borrowers land, for which the value can not be estimated. The average interests have been calculated for the remaining 101 loans, and could - in reality - be said to be somewhat higher.

Table B:2 Average annual interests for the loans

<table>
<thead>
<tr>
<th></th>
<th>Relatives friends</th>
<th>Others</th>
<th>Cash loans</th>
<th>Kind loans</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average interest</td>
<td>33.5%</td>
<td>95.0%</td>
<td>53.7%</td>
<td>83.5%</td>
<td>65.8%</td>
</tr>
<tr>
<td>per all loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average interest</td>
<td>100.6%</td>
<td>109.5%</td>
<td>100.6%</td>
<td>114.2%</td>
<td>107.2%</td>
</tr>
</tbody>
</table>
b) Securities.

The following types of securities for the loans were observed:

I Written contract between lender and borrower
II Witnesses to the agreement (usually 1 - 3 persons)
III Persons guaranting the loans (" " " )
IV The lenders have security in the form of land from the borrower
V No security at all

The table below shows the number of loans and the percentage of the number of loans with the different forms of securities mentioned above. Loans from relatives and friends and cash and kind loans are shown separately.

<table>
<thead>
<tr>
<th>Type of Security</th>
<th>Loans from relatives and friends</th>
<th>Loans in cash</th>
<th>Loans in kind</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no. %</td>
<td>no. %</td>
<td>no. %</td>
<td>no. %</td>
</tr>
<tr>
<td>I Written contract</td>
<td>19 38.0 55 90.2</td>
<td>51 72.9 56.1</td>
<td>74 66.7</td>
<td></td>
</tr>
<tr>
<td>II Witnesses</td>
<td>19 38.0 48 78.7</td>
<td>48 68.6 46.3</td>
<td>67 60.4</td>
<td></td>
</tr>
<tr>
<td>III Guarantors</td>
<td>12 24.0 37 60.7</td>
<td>32 45.7 41.5</td>
<td>49 44.1</td>
<td></td>
</tr>
<tr>
<td>IV Security</td>
<td>2 4.0 8 13.1</td>
<td>10 14.3 0</td>
<td>10 9.0</td>
<td></td>
</tr>
<tr>
<td>Loans with any security</td>
<td>23 46.0 58 95.1</td>
<td>78.6 63.4</td>
<td>81 73.0</td>
<td></td>
</tr>
<tr>
<td>V Loans without security</td>
<td>27 54.0 3+</td>
<td>15 21.4 36.6</td>
<td>30 27.0</td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>50 100.0 61 100.0</td>
<td>70 100.0 41 100.0</td>
<td>111 100.0</td>
<td></td>
</tr>
</tbody>
</table>

To be noted: + means that 2 loans marked no security have been given by a landowner to his tenant. In such cases it is not very important to have securities since there is a close dependence between the parties involved.
C. INDEBTEDNESS

Table C:1: Percentage of farmers, landowners and tenants who were indebted at the time for the study or at any time during the 12 months period.

<table>
<thead>
<tr>
<th>Percentage indebted at the time for the study (March - Apr. 1969) (number)</th>
<th>All farmers</th>
<th>Landowners</th>
<th>Tenants</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.6%</td>
<td>28.9%</td>
<td>43.8%</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>13</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage who had been indebted at any time during the 12 months period (March 1968 - March 1969) (number)</th>
<th>All farmers</th>
<th>Landowners</th>
<th>Tenants</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.4%</td>
<td>48.9%</td>
<td>53.1%</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>22</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total number (number)</th>
<th>All farmers</th>
<th>Landowners</th>
<th>Tenants</th>
</tr>
</thead>
<tbody>
<tr>
<td>(109)</td>
<td>(45)</td>
<td>(64)</td>
<td></td>
</tr>
</tbody>
</table>

Table C:2: Size of average debt at the time for the study, measured in Eth. $

<table>
<thead>
<tr>
<th>All farmers</th>
<th>Landowners</th>
<th>Tenants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average size of loan</td>
<td>68.6</td>
<td>138.7</td>
</tr>
<tr>
<td>Median size of loan</td>
<td>20.0</td>
<td>70.0</td>
</tr>
<tr>
<td>Average number of loans per borrowing farmer</td>
<td>1.9</td>
<td>2.2</td>
</tr>
<tr>
<td>Average (total) debt (all farmers)</td>
<td>49.7</td>
<td>89.4</td>
</tr>
<tr>
<td>Median debt (all farmers)</td>
<td>5.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Average debt (indebted farmers)</td>
<td>132.1</td>
<td>309.4</td>
</tr>
<tr>
<td>Median debt (indebted farmers)</td>
<td>38.9</td>
<td>70.0</td>
</tr>
</tbody>
</table>

D. CASH and KIND loans

Table D:1: Number and volumes for cash loans and kind loans as percentages of all loans.

<table>
<thead>
<tr>
<th>Time period</th>
<th>Cash loans</th>
<th>Kind loans</th>
<th>All loans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of num.</td>
<td>% of vol.</td>
<td>% of num.</td>
</tr>
<tr>
<td>At the time for the study</td>
<td>72.2</td>
<td>94.7</td>
<td>27.8</td>
</tr>
<tr>
<td>During the last 12 months</td>
<td>63.1</td>
<td>90.5</td>
<td>36.9</td>
</tr>
<tr>
<td>Average size of loan (Standard deviation)</td>
<td>Cash loans</td>
<td>Kind loans</td>
<td>All loans</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>82:25</td>
<td>14:75</td>
<td>57:31</td>
</tr>
<tr>
<td></td>
<td>118.2</td>
<td>8.1</td>
<td>99.3</td>
</tr>
</tbody>
</table>
Time stipulations.

Table D:2: Loans with a stipulated duration that ran out before 1/3 1969, after that date, and loans without stipulated time for repayment.

<table>
<thead>
<tr>
<th>Time stipulations</th>
<th>number</th>
<th>% of number</th>
<th>volumes $</th>
<th>% of vol.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans due to repayment before 1/3 1969</td>
<td>89</td>
<td>80.2</td>
<td>3510.60</td>
<td>55.2</td>
</tr>
<tr>
<td>Loans due to repayment after 1/3 1969</td>
<td>13</td>
<td>11.7</td>
<td>1526.00</td>
<td>24.0</td>
</tr>
<tr>
<td>Loans without stipulated time +</td>
<td>9</td>
<td>8.1</td>
<td>1325.00</td>
<td>20.8</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td>100.0</td>
<td>6361.60</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Out of these 9 loans 8 (representing 1125 $ were taken by one man who had to give the lender a large part of his land as a security. The lender has the right to use the land until the loan is paid back.

Table D:3: Percentages of cash and kind loans respectively that have been paid back within the time stipulated that ran out before 1/3 1969.

<table>
<thead>
<tr>
<th>Number of loans with a stipulated time for repayment that ran out before 1/3-69</th>
<th>Volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of loan</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>number</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash loans</td>
<td>50</td>
</tr>
<tr>
<td>Kind loans</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
</tr>
</tbody>
</table>

To be noted: Only 21% of the cash loans are paid back in time. The situation is better for kind loans: 56%. Usually it is agreed that the kind loans shall be paid back after the following harvest, and at that time - if the harvest is not very bad - the borrower has got crops as expected.
E. PURPOSE OF THE LOANS TAKEN

The table below shows the distribution of the loans taken for different purposes.

Table C:1: Volumes, percentages of volumes, number of loans, and percentages of number of loans taken for different purposes.

<table>
<thead>
<tr>
<th>Purpose of the loan</th>
<th>Volume borrowed</th>
<th>%</th>
<th>Number of loans</th>
<th>%</th>
<th>Average size of loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Productive purpose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Seed</td>
<td>1249.90</td>
<td>19.6</td>
<td>36</td>
<td>32.4</td>
<td></td>
</tr>
<tr>
<td>b) Cattle, animals</td>
<td>640.00</td>
<td>10.1</td>
<td>4</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>c) Other use in agriculture</td>
<td>85.00</td>
<td>1.3</td>
<td>5</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>d) Prod. use outside agriculture</td>
<td>1480.00</td>
<td>23.3</td>
<td>9</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>II Not prod. purpose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Household consum.</td>
<td>690.90</td>
<td>10.9</td>
<td>32</td>
<td>28.8</td>
<td></td>
</tr>
<tr>
<td>b) Clothing</td>
<td>195.00</td>
<td>3.0</td>
<td>7</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>c) Taxes</td>
<td>50.00</td>
<td>0.8</td>
<td>3</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>d) Other expenses (feasts, courtcases)</td>
<td>1970.80</td>
<td>31.0</td>
<td>15</td>
<td>13.5</td>
<td></td>
</tr>
<tr>
<td>III Total</td>
<td>6361.60</td>
<td>100.0</td>
<td>111</td>
<td>100.0</td>
<td>57.30</td>
</tr>
</tbody>
</table>

To be noted: In some cases a quantity of seed has been borrowed for both prod. use and consumption. It has not been possible to tell exactly how much of the crop went into consumption or was used as seed. When we - and the respondents - did not know we split the quantity 50/50.

The post "productive use outside agr." includes buying of land, money for trading goods or animals etc.

The post "other expenses" includes paying fines, courtcases, feasts, visits to hospital, etc.

F. THE INTERVIEWED FARMERS' LENDING TO OTHERS

Under point 3.2 above we have mentioned the risk of getting untrue answers when asking people about their own lending to others. Because of that risk we have not drawn any conclusions about the lending to others for the whole population.
Interesting difference between the loans taken by the interviewed farmers and the loans given to others:

Table F:1. Difference between loans taken and loans given by respondents.

<table>
<thead>
<tr>
<th></th>
<th>Average rate of annual interest</th>
<th>Percentage of number of loans that carry interest against loans per all per</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans taken</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(by respondents)</td>
<td>65.8</td>
<td>107.2</td>
</tr>
<tr>
<td>Loans given</td>
<td>32.0</td>
<td>71.4</td>
</tr>
</tbody>
</table>

This table gives reason to suspect that the figures do not give a true picture. After the interviews we classified 16 of the loans given to others that were said to carry no interest, as doubtful: it is our belief, that they really carry interest. In some other cases we believe that the rates of interest is higher than the respondents said.

G. OTHER ECONOMIC CONDITIONS

Table G:1: Size of land owned and land cultivated, in hectares.

<table>
<thead>
<tr>
<th>Per all farm.</th>
<th>Per Lo.</th>
<th>Per T.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land owned: average</td>
<td>-</td>
<td>17.8 ha</td>
<td>-</td>
</tr>
<tr>
<td>Land cultivated: average</td>
<td>6.5 ha</td>
<td>10.1 ha</td>
<td>4.0 ha</td>
</tr>
<tr>
<td>Percentage of farmers with a cultivated area of more than 5 hectares (= 1 Teffer)</td>
<td>39.4%</td>
<td>57.8%</td>
<td>26.7%</td>
</tr>
<tr>
<td>(Number interviewed)</td>
<td>109</td>
<td>45</td>
<td>64</td>
</tr>
</tbody>
</table>

To be noted: The figures in table G:1 above are uncertain because there are several ways of measuring areas. We have used a very simplified way - which we know is not correct, but maybe the best available, if one has not the possibility to measure every farmers land.

1 gasha = 8 teffers = 160 timads = 40 hectares
1 teffer = 20 timads
1 timad = 0.25 hectare (really a timad is a piece of land that a farmer with a pair of oxen can plough in one day. According to the type of soil, the strength of the oxen and the working capacity of the farmer, the size of a timad may vary from place to place).
Table G.2: The interviewed farmers own lending to others

<table>
<thead>
<tr>
<th>Lender indebted himself</th>
<th>Lender not indebted</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lo</td>
<td>T</td>
<td>Lo</td>
</tr>
<tr>
<td>a) Number of persons who had anything lent out during any time of the 12 months' period.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>b) Number of persons who had anything lent out at the time for the study.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>c) Number of loans given to others during the 12 months' period.</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>d) Number of loans given to others and still out at the time for the study</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>e) Number of loans to others out at the time for the study, per lender</td>
<td>5.0</td>
<td>2.0</td>
</tr>
<tr>
<td>f) Number of persons interviewed</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>g) Percentage (of number of persons) with anything lent out at the time for the study</td>
<td>6.7</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Table G.3: Average size of lented amount

<table>
<thead>
<tr>
<th>Category of farmer</th>
<th>Total volume (Bth. d)</th>
<th>Average per all farmers</th>
<th>Average per lending farm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowners</td>
<td>2766.10</td>
<td>61.50</td>
<td>251.50</td>
</tr>
<tr>
<td>Tenants</td>
<td>522.90</td>
<td>8.20</td>
<td>87.20</td>
</tr>
<tr>
<td>All farmers</td>
<td>3289.00</td>
<td>30.20</td>
<td>193.50</td>
</tr>
</tbody>
</table>
Table G:4: Farmers' income and expenditures.

<table>
<thead>
<tr>
<th>Sources of income and expenditure</th>
<th>a) Amount (volume)</th>
<th>b) Percentage of total. (a as %)</th>
<th>c) Number of farmers</th>
<th>d) Percentage of all farmers. (c as %)</th>
<th>e) Average amount per farm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling crops</td>
<td>24,222</td>
<td>75.0</td>
<td>93</td>
<td>85.3</td>
<td>260</td>
</tr>
<tr>
<td>Selling animals</td>
<td>5,192</td>
<td>16.1</td>
<td>49</td>
<td>45.0</td>
<td>106</td>
</tr>
<tr>
<td>Trading</td>
<td>2,250</td>
<td>6.9</td>
<td>12</td>
<td>11.0</td>
<td>189</td>
</tr>
<tr>
<td>Work for other</td>
<td>331</td>
<td>1.0</td>
<td>7</td>
<td>6.4</td>
<td>47</td>
</tr>
<tr>
<td>Other income</td>
<td>307</td>
<td>1.0</td>
<td>4</td>
<td>3.7</td>
<td>77</td>
</tr>
<tr>
<td>Total income</td>
<td>32,282</td>
<td>100.0</td>
<td></td>
<td></td>
<td>295</td>
</tr>
</tbody>
</table>

Expenditures:

a) for productive purpose

| Buying crops | 1,770 | 7.0 | 43 | 39.4 | 41 |
| Buying animals | 5,316 | 20.9 | 52 | 47.7 | 102 |
| Buying tools | 308 | 1.2 | 61 | 56.0 | 5 |
| Prod. purpose | 7,394 | 29.1 | 68 |       |   |

b) for non productive purpose

| Buying clothes | 12,337 | 48.6 | 101 | 92.7 | 122 |
| Paying taxes | 2,124 | 8.4 | 78 | 71.6 | 27 |
| Exp. for food, feasts, other items | 3,526 | 13.9 | 88 | 80.7 | 40 |
| Non prod. purp. | 17,987 | 70.9 |       |       | 165 |
| Total expend. | 25,381 | 100.0 |       |       | 232 |

To be noted: There is reason to believe that the respondents remember their income better than their expenditures. This is of course natural: during one year it is not possible to remember all small outlays for a whole family. For this reason it is not possible to calculate the size of the farmer's savings during the year.

5.3 ESTIMATING PARAMETERS FOR THE WHOLE PROJECT AREA.

The following sample technique has been used: two stage sampling in which the primary units (the gashas) were picked systematically from a list covering the whole area, and the secondary units (the farmers in every gasha) were sampled at random. There is
no reason to suspect any periodicity in the sampling of gashas and we can regard the sampling method as equal to sampling at random in both stages.

When estimating the different parameters we have used "ratio-to-size estimate" (see Cochran, page 300) which can be used when the units have been picked with equal probability.

Symbols and formula used for the calculations.
Symbols used in the formula for calculating different means: (Cochran page 293):
a) Every primary unit

<table>
<thead>
<tr>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of elements</td>
<td>$M_i$</td>
</tr>
<tr>
<td>Mean per element</td>
<td>$\bar{Y}_i$</td>
</tr>
<tr>
<td>Total</td>
<td>$Y_i = \sum M_i \bar{Y}_i$</td>
</tr>
</tbody>
</table>

b) The whole population or sample

<table>
<thead>
<tr>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of elements</td>
<td>$M_0 = \sum M_i$</td>
</tr>
<tr>
<td>Total</td>
<td>$Y = \sum Y_i$</td>
</tr>
<tr>
<td>Mean per element</td>
<td>$\bar{Y} = Y / N$</td>
</tr>
<tr>
<td>Mean per primary unit</td>
<td>$\bar{Y}_i = Y / M_i$</td>
</tr>
</tbody>
</table>

Sample fraction for primary units: $f_1$

Sample fraction for secondary units: $f_2$

$\hat{Y}_R = \sum \frac{M_i \bar{y}_i}{M}$

$S_{2i} = \text{variance}$

$\bar{Y}_R = \frac{\sum M_i \bar{y}_i}{\sum m_i}$

Formula used: $\hat{Y}_R = \sum \frac{M_i \bar{y}_i}{M}$

with the following variance for the estimate:

$\text{Var}(\hat{Y}_R) = \frac{1 - f_1}{n(M)} \cdot \sum \frac{M_i (\bar{y}_i - \hat{Y}_R)^2}{n - 1} + \frac{f_1 (1 - f_2)}{n^2 \bar{m} M} \sum M_i S_{2i}^2$

where $S_{2i}^2 = \frac{\sum (\bar{y}_i - \bar{g}_i)^2}{m_i - 1}$
Since the sampling fraction for the primary units $f_1 = 0.01$ (very small) we may neglect the last component in the formula above.

5.3.2 Estimating average debt

Table 5.3.2: Estimated average debt, debt in cash, debt in kind, for productive purpose and not productive purpose for the whole population and for the whole period and at the time for the study, with standard errors for the estimates.

<table>
<thead>
<tr>
<th>Category of loans</th>
<th>Estimated mean</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash (whole period)</td>
<td>52.82 (\phi)</td>
<td>17.82 (s)</td>
</tr>
<tr>
<td>Cash (at time for study) (\text{= not paid})</td>
<td>47.08 (\phi)</td>
<td>17.49</td>
</tr>
<tr>
<td>Kind (whole period)</td>
<td>5.55 (\phi)</td>
<td>1.14</td>
</tr>
<tr>
<td>Kind (at time for study)</td>
<td>2.62 (\phi)</td>
<td>0.66</td>
</tr>
<tr>
<td>Productive (whole period)</td>
<td>31.70 (\phi)</td>
<td>10.73</td>
</tr>
<tr>
<td>Not prod. &quot; &quot;</td>
<td>26.67 (\phi)</td>
<td>11.56</td>
</tr>
<tr>
<td>Total (whole period)</td>
<td>58.37 (\phi)</td>
<td>17.56</td>
</tr>
<tr>
<td>Total (at time for study)</td>
<td>49.70 (\phi)</td>
<td>17.40</td>
</tr>
</tbody>
</table>

5.3.3 Estimating total amounts borrowed in the whole area.

We have not been able to estimate the average size of debt per indebted farmer with the method used above, since it would be necessary to know the number of indebted farmers in every sampled gasha, which we do not know. We have instead, estimated the total amount borrowed in the whole area and the proportion of the farmers indebted in order to get an estimate of the amount borrowed per indebted farmer. The disadvantage of this method is that we can not know the variance for the estimates.

Estimated number of farmers in the whole area: 90 000.

(See point 1:1). Estimate for total amount borrowed: $90 000 \cdot \bar{Y}_R$

Variance for this estimate: $(90 000)^2 V(\bar{Y}_R)$.
Table 5.3.3: Estimates for total amounts borrowed in the whole area.

<table>
<thead>
<tr>
<th></th>
<th>Estimated total amount borrowed</th>
<th>Standard error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash (whole period)</td>
<td>4 753 800</td>
<td>1 603 592</td>
</tr>
<tr>
<td>Cash (at the time for the study)</td>
<td>4 237 200</td>
<td>1 574 048</td>
</tr>
<tr>
<td>Kind (whole period)</td>
<td>499 500</td>
<td>102 200</td>
</tr>
<tr>
<td>Kind (at the time for the study)</td>
<td>235 800</td>
<td>59 017</td>
</tr>
<tr>
<td>Productive purpose</td>
<td>2 853 000</td>
<td>965 856</td>
</tr>
<tr>
<td>Not productive purpose</td>
<td>2 400 300</td>
<td>1 040 580</td>
</tr>
<tr>
<td>Total (whole period)</td>
<td>5 253 300</td>
<td>1 598 432</td>
</tr>
<tr>
<td>Total (at the time for the study)</td>
<td>4 473 000</td>
<td>1 566 000</td>
</tr>
</tbody>
</table>

5.3.4 Estimating proportion indebted farmers, and average debt.

The estimation of the proportion indebted farmers in the whole project area has been done by using the same formula as was used when estimating the average debt per all farmers, with the difference that the variable can only have an value of 1 or 0 (indebted or not).

Estimated proportion indebted farmers at any time of the year: \( P^x = 0.514 \).

Variance for this estimate: \( V(P^x) = 0.012 \).

Estimate of the number of indebted farmers (at any time of the 12 months period): 90 000 \( \times \) 0.514 = 46 260.

Standard deviation: 9 671

Estimated proportion indebted farmers at the time for the study: \( P^x = 0.376 \).

Variance for this estimate: \( V(P^x) = 0.0073 \).

Estimate of the number of farmers indebted at the time for the study: 90 000 \( \times \) 0.376 = 33 840.

Standard deviation: 7 663

Estimated of the average debt (per indebted farmer) calculated on the basis of estimated total amount borrowed in the whole area and the estimated number of farmers indebted.
Table 5.3.4: Estimated average debt per indebted farmer

<table>
<thead>
<tr>
<th>Category of debt</th>
<th>During the 12 months (Eth. $)</th>
<th>At the time for the study (Eth. $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>102.76</td>
<td>125.21</td>
</tr>
<tr>
<td>Kind</td>
<td>10.00</td>
<td>6.98</td>
</tr>
<tr>
<td>Total</td>
<td>113.56</td>
<td>132.19</td>
</tr>
<tr>
<td>Prod. purpose</td>
<td>61.67</td>
<td></td>
</tr>
<tr>
<td>Not prod. purpose</td>
<td>51.89</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>113.56</td>
<td></td>
</tr>
</tbody>
</table>

5.3.5 Estimating different characteristics of the loans.

The loans are not independent since several loans have been taken by the same farmer, and it is the farmers who are the secondary units in our study, we can not make any valuable estimates for the whole population.

5.3.6 Comments

The precision of the estimates are indicated by the standard deviations. In our opinion the precision is low.

We have not tried to establish any confidence limits for our estimates because of the difficulties to do so in two stage sampling. Our statistical reference book Cochran: "Sampling techniques" does not mention any methods.

5.4 CONCLUSION

The purpose of this study has been to describe the present credit situation of the farmers in the project area. After some time new studies will be made and the results from the studies will be compared. The differences observed can be used as one of several components in the evaluation of CADU's credit programme.

There will be some problems when trying to make a statistical comparison between the results from this study and from the next. We should have had more information - for example about the situation of all the farmers in the sampled gashas - in order to make better and more precise generalizations about the population as a whole.

When doing the future studies it would be recommendable to sample a smaller number of gashas and to interview all the
farmers in each gasha instead. This would very much facilitate the statistical calculations.

However, it is our belief that the information obtained from this study will be of value when trying to observe the differences in the credit structure, which eventually will be the result of the credit programme.

Lund, 31 of July, 1969

Göran Bergman  Håkan Lindqvist
# REFERENCES

**CADU publications:**

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 1</td>
<td>Part I: General Background</td>
<td>Oct. 1966</td>
</tr>
<tr>
<td>B: 14</td>
<td>General Agricultural Survey</td>
<td>Aug. 1968</td>
</tr>
<tr>
<td>B: 15</td>
<td>CADU Statistical Digest</td>
<td>May 1968</td>
</tr>
<tr>
<td>B: 22</td>
<td>A Case Study of Peasant Farming in the Digelu and Yeloma Areas, Chilalo Awraja</td>
<td>Jan. 1969</td>
</tr>
</tbody>
</table>

**CADU stencils:**

- CADU: Project Description
- CADU: Agricultural Credit Programme

**General Literature:**

- Rydén, H.: Agricultural Credit in Developing Countries. FAO, Rome 1964
APPENDIX

Validity of the answers.

Figure: A simple communications model for the interviews:

```
Researcher 1) Questionnaire 2) Interviewer (Interpreter 4) Respondent 3)
```

Different stages in the communications flow.

1) The researcher makes the questionnaire
2) The interviewer reads the questionnaire
3) The interviewer puts the questions to the respondent
4) The respondent answers the questions
5) The interviewer fills the questionnaire

1) **The researcher makes the questionnaire**

The validity is high: the questions are elaborated to fill the purpose of the study, and if we get the correct answers, we shall have a good picture of the credit situation among the farmers. (This point is further discussed under point 1.3 - 1.3.4, point 2.1, point 2.3.4 and point 3.1 in our report.)

A pilot study in order to test and improve the questionnaire has been made.

2) **The interviewer reads the questionnaire.**

The validity is high: The interviewers have participated in making the questionnaire and they understand well the purpose of each question and the meaning of the study. The first 50 interviews were made by researcher and interviewers together - to ensure accuracy.

3) **The interviewer puts the questions to the respondent**

At this stage there is a certain validity risk: A general rule is that the "interviewer bias" tend to be higher in attitude tests than in interviews asking for "facts". In this study we are only interested in "facts". But one can never ignore the "interviewer bias" completely.

Very often the respondents did not understand the questions at once, so careful explanations had to be given. In some cases it was necessary to mention some types of expenditures (for example), just to make the respondent remember. This might have had some influence on the answers.
It is our belief, however, that the interviewers took great care not to direct the answers in any biased way.

4) The answers from the respondents.

Here is the real validity problem. We have elsewhere in this report indicated some of the possible reasons for bad validity: lacking memory, over estimates of income or expenditures, lies about rates of interest for loans given to others, etc.

a) Bad memory

Our survey tries to cover the period of the last 12 months. Naturally it is very difficult for a farmer to remember all his transactions during this period especially since he has no written record.

We believe that the farmers very well remember their borrowing and lending, as well as their major transactions. Even the dates when (for ex.) the loans were taken are remembered.

There are several control questions in the questionnaire, in order to check if the amounts mentioned seem reasonable. For example: we compared size of income from selling crop with area cultivated and the farmer's family size on one hand and with his expenditures and amounts borrowed on the other. If we found any discrepancy, we reformulated our questions to find out that was missing.

We know that the farmers generally underestimated their expenditures probably they forgot a large part of all the minor posts. (See table 0:4 page 47: Total income among the respondents: 32.282, total expend.: 25.381. The difference is too big, since there is very little saving in the area).

b) "Group influence".

In our opinion the respondents very often seemed to feel more at ease, if he had some of his friends or neighbours around him when he was interviewed. Usually quite a number of people had gathered around us. To demonstrate that the survey was "just" and to gain confidence from the farmers we must let the others listen to the interview. In some cases there might have been some "group influence" on the answers, for example: almost all the farmers gave very high figures for their expenses for clothes - these figures might be exaggerated for status reasons - although we believe that their cost for clothing is high.

The group influence had one positive effect, too: since the people round the respondent were listening, and since they know the respondent well,
it was not so easy for him to lie about the size of his area or his general economic conditions.

We got the impression that there was some "group influence", but that it did not seriously afflict the validity of the answers. (If we were testing attitudes the "group influence" would have caused more problems to the validity.)

c) **Purposely given untrue information**

In order to get the confidence of the farmers and to improve our chances of getting true answers to our questions, we carefully explained the purpose of our study (and of course introduced ourselves and C.A.D.U.). We told the farmers that the information should be treated confidently, and that we had nothing to do with taxation, which would have frightened some of our respondents. Almost all farmers we met knew fairly well about CADU, and seemed to have positive feelings towards it. All sampled farmers were willing to be interviewed.

We found no reason to believe that there was any significant lying about the sizes of land, family, income or expenditures. (We had control questions and when those gave reasons for doubt it was usually only some post that had been forgotten.) We also got the impression that their information about borrowing was true, on the whole.

The only matter about which we suspected some lying - or, put more politely, some understatements, was there own lending to others and the rate of interest and other terms for these loans. (See table F:1 page 44) The validity of this information is, no doubt, low.

5) **The interviewer fills the questionnaire**

The validity is high: the interviewers know the questionnaire very well and it is our belief that no important errors were made at this stage.

**Conclusion**

Although our possibilities to verify the truth of the information given by the respondents are very limited - apart from our own control questions and normal common sense - we believe that the validity of the answers is high with one exception: size of own lending to others and the terms charged for this lending.