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CREDIT CONSULTANCY REPORT

ON

"TRAINING OF WOMEN IN THE SAHEL (ORD)"

17

CREDIT (REVOLVING FUND) ACTIVITY  
(USAID PROJECT NUMBER 686-0226)

BY

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Agricultural Economist

SEPTEMBER 25 - OCTOBER 18, 1980

Consultancy Contract  
(IQC/AID/SOD/PDC-C-0189, Work Order No. 13)

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Between

USAID/Upper Volta  
B.P. 35, Ouagadougou, Upper Volta  
and

DEVELOPMENT ALTERNATIVES INC.  
1823 Jefferson Place, N.W.  
Washington, D.C. 20036

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## TABLE OF CONTENT

|  | <u>Page</u> |
|--|-------------|
| I. INTRODUCTION  | 3           |
| II. METHODOLOGY  | 5           |
| III. PROBLEMS AND RECOMMENDATIONS                                  | 6           |
| 1. Terms and Conditions of Loans                                   | 6           |
| 2. Loan Repayment Procedure  | 8           |
| 3. Accounting System for Loan Funds                                | 10          |
| 4. Financial Viability   | 11          |
| 5. Financial Reporting   | 12          |
| 6. Borrower's Accounting System                                    | 13          |
| 7. Training  | 14          |
| 8. Appropriate Use of Loan Funds in Meeting Development Objectives | 14          |
| 9. Evaluation Criteria   | 16          |
| IV. MAJOR RECOMMENDATIONS  | 17          |

ACRONYMS

|           |   |
|-----------|---|
| CENATRIN  | CENTRE NATIONAL DE TRAITEMENT DE L'INFORMATION<br>(NATIONAL DATA PROCESSING CENTER) |
| CNCA      | CAISSE NATIONALE DE CREDIT AGRICOLE   |
| DAI       | DEVELOPMENT ALTERNATIVES, INC.  |
| GV        | GROUPEMENT VILLAGEOIS (VILLAGE GROUP)   |
| GOUV      | GOVERNMENT OF UPPER VOLTA   |
| MRD       | MINISTRY OF RURAL DEVELOPMENT   |
| PVO       | PRIVATE VOLUNTARY ORGANIZATION  |
| ORD       | ORGANISME REGIONAL DE DEVELOPMENT   |
| SWID      | STRENGTHENING WOMEN'S ROLES IN DEVELOPMENT  |
| TWIS/PFFS | TRAINING OF WOMEN IN THE SAHEL (ORD)/PROJET FORMATION<br>DES FEMMES DANS LE SAHEL   |
| USAID     | UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT                                  |

## I. INTRODUCTION

The "Training of Women in the Sahel (ORD)"<sup>1/</sup> (TWIS) (USAID Project No. 686-0226) is a 1.7 million U.S. Dollar project in Upper Volta which began on September 30, 1978, and is planned to continue through September 30, 1983. Of the total 1.7 million U.S. dollars budget, 150,000 U.S. dollars is earmarked for credit through a revolving loan fund.

This TWIS project consists of "Providing Funds to the Ministry of Social Affairs and Women's Affairs to extend activities of the project for equal access of women and girls to education into the Sahel ORD of Upper Volta with the purpose of training Sahelbased extension agents and female paraprofessionals to assist women in organization, financing and management of village interventions (labor-saving technologies, income-generating activities, health and hygiene programs, and local language literacy) through training and such mechanisms as credit and self-help."<sup>2/</sup> Maps showing the project area appear in Annex GG and HH.

The project has two major components: (1) Training of village extension agents and female paraprofessionals. In addition to certain activity-specific skills, agents will be trained in village animation, concepts of credit and operation of a revolving loan fund, baseline data collection techniques, and project monitoring techniques. Paraprofessionals will be chosen by their fellow villagers and trained in activity-specific skills. (2) Identification organization, financing and management of village interventions by Sahelian women. Activities will be financed through a revolving loan fund and by means of demonstration and pilot-project grant funds.

Development Alternatives, Inc. (DAI) was contracted by USAID/ Ouagadougou to appraise the credit activities of this TWIS project. <sup>3/</sup> This appraisal was made by the author. During a 16-day consultancy in Upper Volta beginning September 25, 1980.

The scope of work of this contract states that the contractor will collect information and make recommendations on the following issues:

- 
- 1/ Formerly titled "Non-Formal Education/Women in the Sahel"
  - 2/ Pro-Ag signed in Ouagadougou, September 30 1978
  - 3/ Sahel Regional (Upper Volta), AID/PIO/P No. 625-0929-3-00024, Planning, Management and Research Project (625-0929, signed in Ouagadougou, September 4, 1980.

1. Terms and conditions of loans
2. Loan repayment procedure
3. Accounting system for loan funds
4. Financial viability of loan funds
5. Financial reporting
6. Borrowers accounting system
7. Training
8. Appropriate use of loan funds in meeting development objectives
9. Evaluation criteria.

## II. METHODOLOGY

The appraisal of the credit part of the TWIS project was done during the 16-day consultancy by reviewing the project documentation, through discussions with the persons working with the project, and from a visit to the project site in the Sahel ORD, September 10 - October 3, 1980.

The persons with whom discussions took place and from whom information was received are listed in Annex A.

Though no loans had been given by the time this appraisal was completed, 23 loan requests had been received by the extension agents from 9 of the villages in which TWIS is working. The details on these loan requests are shown in Annex B.

The TWIS project goal is to increase the economic and social opportunities of the Sahel population in the project villages, especially women. Progress toward achievement of this goal will be indicated by:

- (a) increase in family income;
- (b) improvement in family health and nutrition; and
- (c) measurable decrease in time and energy of village women spent on household chores. 1/

The appraisal of the credit part of the TWIS project was made by the author based on the goal stated above. After reading through the project documentation and after talking with persons responsible for the project, the author expanded on this goal and developed a set of guiding principals used to appraise the credit part of TWIS and to make recommendations in the section that follows. The set of guiding principles is as follows:

- Decentralized administration.
- Strengthening capital absorption capacity.
- Viability of the credit system.
- Effective control through effective accounting.
- Training in business management.

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1/ Annex 1 of Pro-M/5.

### III. PROBLEMS AND RECOMMENDATIONS

This section of the report is organized to conform to the topics specified in the scope of work of this consultancy contract. The list of topics treated in this section of the report are:

1. Terms and conditions of loans.
2. Loan repayment procedure.
3. Accounting system for loan funds.
4. Financial viability of loan funds.
5. Financial reporting.
6. Borrowers accounting system.
7. Training.
8. Appropriate use of loan funds in meeting development objectives.
9. Evaluation criteria.

#### 1. Terms and conditions of loans

Loans are given for income-generating and labor-saving purposes, such as: collective fields, vegetable production and marketing, handicraft production, soap making, cheese production, small livestock production and marketing, village stores, grain mills and donkey carts. These loans are given at 8% interest for 2 or 3 years with one year of grace on repayment.

Interventions to be financed under the projects loan fund must meet the following criteria:

a) For loans of U.S. \$1,000 or less, not fewer than 10 people must participate in the project. For loans exceeding U.S. \$1,000 not fewer than 15 participants must be involved. In exceptional cases, individual loans will be granted if the applicant can demonstrate the ability to repay the loan;

b) For loans of U.S. \$1,000 or less, the loan application must be approved by the village committee, the village extension agent, and the Dori team leader, and also by the team agriculturalist, if the intervention involves crop cultivation or livestock raising. For

larger loans, the USAID technical advisor and the Director of Women's Affairs must also concur.

c) Loans over U.S. \$1,000 will require a feasibility study to be performed under the auspices of the Dori management team.

d) Loans will be contingent upon receipt by the Dori management team of a down payment of five percent of the total cost of the intervention. Down payments can be either in cash or in kind. These down payments go back to the village to help finance the intervention.

Specifically the steps followed by a borrower in obtaining a TWIS loan are listed in Annex C.

A loan contract is signed by the borrower, the president of the village committee and the extension agent (Annex G).

The guarantee for repayments of the loan is in the endorsement of the loan request by the 15-woman village committee and their agreement to take responsibility for repayment of the loan as symbolized by the signature of the president of the village committee on the loan contract (Annex G).

#### Problems

- None of the \$150,000 U.S. dollars available for credit had been disbursed as of the time of this appraisal.

- Village groups are being formed for the primary purpose of making loan requests a long time before the village group has had time to prove its credit-worthiness by completing a project independent of credit.

- Villagers see no need to struggle over the tedious task of producing an estimate of profit expected from the credit investment. If TWIS has confidence in the borrower, they believe nothing more is needed in terms of loan feasibility studies.

#### Recommendations

- Village groups should be organized first for purposes other than receiving credit from the TWIS project such as collective fields. After having successfully completed some project on their own and after having been judged strong and credit worthy by the TWIS staff (using criteria such as those listed in Annex H) the group could be encouraged to apply for a loan from TWIS.

- The village committee should develop its own set of criteria (such as those listed in Annex I) for use in judging the acceptability of a loan request.
- The exact procedure for getting a loan should be simple, clear fast and yet provide assurance that the loan will be repayed. (See Annex J.)
- The demand/feasibility study should show that the village committee has subjected both the borrower and the loan purpose to its own criteria for approving a loan request as well as showing details of how the loan will be spent and from where the money for repaying the loan will come (Annex K).
- Policy of charging interest on grace period should be continued.
- Continue decentralized loan approval procedure with \$1,000 breaking point on loan size that can be approved by the village committee (using thorough, but fair criteria, see Annex I).
- Stress more the criteria for determining whether a village group is strong (credit worthy) (See Annex H) than any absolute minimum number of members in determining eligibility of a group for a loan.
- Add credit unions and cereal banks, to the list of loan purpose possibilities (Annex B).
- Term of small business loans for food preparation should be reduced to one year with no deferred payment and repayment should be made in 12 equal monthly installments.
- The 8% annual interest charged on the outstanding balance is not adequate to cover the cost of (1) inflation, (2) administration, and (3) default. If the loan fund is to be viable, the interest rate should be raised to a level high enough to cover these items.

## 2. Loan Repayment Procedure

Because no loans have been given, no repayments have been made. Even so, the procedure for collecting loans were described as seen in Annex L.

### Problems

- The policy of one year of grace and then repayment every six months, while appropriate for some loan purposes is not appropriate for all.

- Ambiguity about where money received for loan repayment is to be kept — Dori or Ouagadougou.

### Recommendations

- Loan repayments should be made following the procedure recommended in Annex M.
- Loan installment amounts be estimated by using one of alternative methods shown in Annex N.

### 3. Accounting system for loan funds

The accounting system proposed 1/ for the loan funds to be kept by Dori accountant, consists of:

- A journal showing all receipt and disbursements and a running balance by village (with receipts attached) (Annex O.).
- Monthly control sheet for each village showing repayment status of each loan in each village (Annex P.)
- Copies of all loan contracts (Annex G)
- Check book for credit account (kept by National Director in Ouaga).

### Problems

- While the system shows effectively the balance in the credit account at any point in time and less effectively (for each reporting period of three months), the number of loans given, the number of persons benefitting from these loans, the amount loaned out, the amount repayed and the amount left to be repayed; it does not provide the information required to calculate the repayment rate. 2/

- The amount of work required to keep up the monthly control sheet for each village is excessive.

- Check writing authority in Ouaga is too far removed from project site in Dori.

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1/ Proposed but not yet fully installed at the time the author analyzed this TWIS credit program.

2/ Repayment rate is defined as the amount of loan repayments collected during the reporting period as a percentage of the amount that should have been collected.

### Recommendations

- The TWIS credit account should be handled by the National Agricultural Credit Bank (CNCA) with loan disbursements and loan collections being handled by the CNCA agents in Dori.
- All new loans given and all loan repayments received should be registered on the computerized credit management system (Annex Q) through CNCA to CENATRIN. CENATRIN would produce periodically the pertinent statistics needed to manage this TWIS credit project, namely:
  - . Number of loans.
  - . Number of beneficiaries.
  - . Total amount loaned.
  - . Repayment amount.
  - . Repayment/Delinquency rates.

These data would be broken down by village, time period, and loan purpose.

- The following elements from the old system of accounting should be kept:
  - . The journal showing the running balance in the credit account (Annex O).
  - . Copies of loan contracts written (Annex G).
  - . Check book.
- The computerized system would eliminate the need for the monthly control sheet for each village (Annex P).
- A running balance on each loan should be kept in Dori in which the interest rate is calculated by day on the out-standing balance (Annex R).
- Check writing authority for credit account be transferred to TWIS Director in Dori.

### 4. Financial Viability

The Project Paper states:

"Although the revolving fund is expected to decapitalize, over time, given the interest and inflation rates, it is anticipated that the equal access project will be able to obtain without difficulty additional monies from other donors to replenish the fund". 1/

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1/ Taken from page 4 of the Project Paper, signed in Ouagadougou on July 11, 1978.

### Problems

- The implication from the above statement is that there is no hope of having a viable (self-supporting) credit revolving fund.
- Currently grants and loans are made from the same account.
- No provisions has been made for administering the revolving fund after the end of the life of the project (September 30, 1983).

### Recommendations

- Adopt a policy of administering the TWIS credit revolving fund as if it were expected to be viable (self-supporting). This would imply keeping revenue high enough to cover costs. This may mean that interest rates may have to be raised and that administrative costs covered by the project may have to be lowered. Always repayment rates should be maintained above 95%.

- Keep grant funds and grant activities of TWIS completely separate from credit funds and credit activities. Grant projects are gifts and credit projects must be paid plus with interests. Grant funds are expected to disappear and credit funds are expected to be sustained and grow.

- In anticipation of handling the administration of the credit revolving fund beyond the end of the life of the project, it is recommended that the credit fund be transferred immediately to the CNCA. Disbursement and collection of the loans would continue to be through TWIS extension agents until the project end on September 30, 1983. After that disbursement and collection of loans could become the responsibility of CNCA or any other agency designated by the project.

- The computerized management system would produce bills to each borrower to remind them of the status of their account, to encourage repayment and help keep repayment rates high.

### 5. Financial Reporting

USAID/Ouagadougou require quarterly reports from the TWIS credit account which show the following:

- A. Cash balance in the account at the beginning of the reporting period.
- B. Receipts during the reporting period:

- Grants from USAID
- Loan repayments (principal and interest separate)
- C. Total cash available during the reporting period (A + B).
- D. Expenditures during the reporting period:
  - Loans paid out
  - Other expenses
- E. Cash balance at the end of the reporting period (C-D).

#### Recommendations

- Draw from the following sources to meet the USAID quarterly reporting requirements outlined above:

- . Credit contracts (Annex G).
- . Journal de credit (Annex O).
- . Check book
- . Credit account for each loan (Annex R).

#### 6. Borrower's Accounting System

- Since no loans had been given by the time this analysis was completed, no village credit projects had been started. Therefore no borrower accounting systems could be observed. They are discussed, however, with many.

#### Problems

- Illiterate borrowers.
- No training on accounting has been given to those who have requested loans thus far.

#### Recommendations

- Determine the functions that the borrowers accounting system should perform (Annex S).
- Two basic accounts will perform most of the functions mentioned in Annex S:

1. The journal of receipts and expenditures (Annex T, U, Y, and AA).
2. Statement of profit/loss (Annex V, Z, and BB).

- Variations on the basic accounts can be developed for specific TWIS loan projects. For example:

1. Cereal bank (Annex T, U, and V)
2. Village store (Annex W, X, Y and Z)
3. Grain mill (Annex AA and BB).

## 7. Training

TWIS is basically a training project. By the time this analysis was made, one 2-week training course on the principles of agricultural credit had been given to the eight extension agents employed at that time.

### Problems

- Lack of training of villagers responsible for managing TWIS credit projects.

### Recommendations

- Adopt a system of cascade training in which extension agents train villagers.

- Give cascade training on very specific topics that will directly help villagers manage their TWIS loan projects (Annex CC).

- Use literacy trainer to teach numeracy to villagers responsible for the accounts of TWIS loan projects. Such training could begin with the simplest account (Annex W) and then advance to the journal of receipts and expenditures (Annex T, U, Y, and AA). Finally, they could be taught how to do the statement of profit/loss (Annex V, Z, and BB).

## 8. Appropriate Use of Loan Funds in Meeting Development Objectives

The broad development objective to which the TWIS project contributes, is to increase the economic and social opportunities of the Sahelian population in project villages, especially women.

TWIS is expected to coordinate and cooperate with other development assistance agencies (PVOs and other GOUV ministries). Strengthening of the Sahel ORD is a significant underlying project objective. Continuous coordination with the ORD will be ensured by creation of a field level project coordinating committee to be composed of the Voltaic team leader, the USAID technical advisor, the ORD director or his designee and technical specialists as required. 1/

### Problems

- Collaboration with other agencies, especially the ORD, is weak because Dori TWIS director in Dori expects the governor of the Sahel Department to initiate meetings to discuss collaboration, coordination and cooperation. Dori TWIS director is reluctant to initiate meetings directly with the ORD to discuss collaboration.

- Shifting TWIS toward the ORD is a politically delicate task because it may be viewed by the Ministry of Social Affairs and Women's Affairs as shifting responsibility away from them toward the Ministry of Rural Development.

- The Governor of the Sahel Department held one meeting of all agencies involved in development projects in that department in December, 1979 and promised to hold such meeting every three months. Actually no such meeting has been repeated since that first meeting in December 1979.

- Grant funds and credit funds are kept in the same bank account.

- Unclear provisions for continuing the revolving fund activity after the end of the TWIS project (September 30, 1983).

### Recommendations

- Guiding principles stated at the end of part II of this report should be used on the credit part of this TWIS project.

- The awkward process of shifting the credit part of this project to the ORD could be softened by moving the TWIS credit account to the CNCA branch in Dori. CNCA is a National Agricultural Bank serving all credit going to the agricultural sector of the Voltaic economy. Both the Ministry of Social Affairs and Women's Affairs and the Ministry of Rural Development should view the CNCA as an institution which serves all ministries equally.

- A shift to CNCA now would solve the problem of how to handle revolving credit funds beyond the end of the project (September 30, 1983).

- Moving the TWIS credit account to the CNCA should be accompanied by a shift to the CENATRIN computerized system for managing the credit account.

1/ PP, pages 5 and 8.

- Credit activities should be handled in a way that will serve to strengthen the village group (pre-cooperative) movement in Upper Volta. Consistent with this objective, it is further recommended that all aspects of the TWIS project be focused on strengthening village groups.

- Grant funds should be removed from the credit account.

- Adopt a bold and active strategy for lending the full 150,000 U.S. Dollars in sound loans to TWIS villagers by the end of the project in 1983 using the plan for "Building Capital Absorption Capacity" (Annex DD).

### 9. Evaluation Criteria

No specific evaluation criteria for the credit part of the TWIS project were found in the Project Documentation.

### Recommendations

- The CENATRIN computer output should provide data on the following evaluation criteria:

- . Number of loans
- . Number of beneficiaries
- . Total amount loaned
- . Repayment amounts
- . Repayment/delinquency rates

By village, time period, and loan purpose (Annex Q).

- Impact of individual TWIS loans should be evaluated using criteria in Annex EE.

- Impact of TWIS credit project on development of the Sahel should be evaluated using criteria in Annex FF.

#### IV. MAJOR RECOMMENDATIONS

- Decentralization of loan approval and loan collection procedures.
- Shift account for credit to CNCA in Sahel ORD as:
  1. A means of controlling loan repayment money received.
  2. A means of speeding up the loan disbursement procedures by having disbursement procedures, by having disbursement authority in Dori, rather than in Ouagadougou.
  3. A means of avoiding a conflict over the issue of integrating the TWIS credit program with the Sahel ORD credit program and taking it away from the Ministry of Social Affairs and Women's Affairs. CNCA would be regarded as a neutral agency serving both the Ministry of Rural Development and the Ministry of Social Affairs and Women's Affairs.
- Separate loan and grant money.
- Keep \$1,000 breaking point for loan approval authority, but add strong-weak GV classification criteria.
- Use ground-up approach in meeting staffing requirements.
- Require GVs to complete a project on their own before accepting a request from them for a loan.
- Use computerized system of management.
- Have TWIS staff use their own criteria to judge strong/weak GVs.
- Have GVs use their own criteria to judge loan requests as credit worthy or not.
- Basic accounting consists of:
  - . Journal
  - . Profit/loss statement
  - . Running balance on each loan with interest calculated on a daily basis on outstanding balance.
- Check signing authority should be transferred to Dori based director.

ANNEXES

Annex A.

Persons visited during TWIS credit appraisal  
September 23-25, 27-28, 30 - October 1-6, 14, 16-18, 1980

Annex B.

TWIS loan requests received by extension agents as of October 2, 1980

Annex C.

TWIS existing procedure for getting a loan

Annex D.

Demande de pret / financement

Annex E.

Questionnaire - Etude de factibilite

Annex F.

Justificatif de credit

Annex G.

Fiche individuelle de credit

Annex H.

Criteria TWIS agents could use to classify GVs as strong or weak

Annex I.

Recommended criteria by which village committees might judge TWIS  
loan requests

Annex J.

Recommended Procedures for getting a TWIS loan

Annex F

Recommended loan request/feasibility study for a TWIS loan

Annex L.

Existing procedure for repaying a TWIS loan

Annex M.

Recommended procedure for repaying a TWIS loan

Annex N.

Alternative methods for determining loan repayment amounts

Annex O.

Journal de Credit

Annex P.

Bulletin de Controle Mensuel

Annex Q.

The computer — an appropriate technology for managing a viable agricultural credit system in a low income country — Upper Volta

Annex R.

Compte de pret

Annex S.

Functions an accounting system should perform

Annex T.

Journal de caisse de banque de cereales

Annex U.

Journal de caisse de l'acheteur/vendeur de banque cereales

Annex V.

Calcul de benefice net d'une banque de cereales

Annex W.

Inventaire de la boutique

Annex X.

Calcul de montant total de benefices bruts et montant total de vente

Annex Y.

Journal de caisse de la boutique

Annex Z.

Calcul de benefice net de la boutique

Annex AA.

Journal de caisse de moulin

Annex BB.

Calcul de benefice net de moulin

Annex CC.

Topics to be taught to GVs with TWIS loans through cascade training

Annex DD.

Building capital absorption capacity

Annex EE.

Criteria for evaluation of individual TWIS projects

Annex FF.

Criteria for evaluation of impact of TWIS on development of the Sahel

Annex GG.

General map of Upper Volta

Annex HII.

Training women in Sahel project. Project intervention areas.

ANNEX A.

PERSONS VISITED DURING TWIS CREDIT APPRAISAL

SEPTEMBER 23 - 25, 27 - 28, 30, OCTOBER 1 - 6, 14, 16 - 18, 1980

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Ouagadougou

|                      |  |
|----------------------|--|
| Madame Sanfo         | National Director of Women's Affairs<br>Ministry of Social Affairs |
| Meyer, Richard C.    | USAID Mission Director   |
| Thomas, Howard       | USAID Chief, Human Resources Division                              |
| Byllesby, Gary       | USAID Controller   |
| Kramer, Bob          | USAID Budgeting and Accounting Officer                             |
| Stack, Kathy         | USAID TWIS Project Manager   |
| Cuoba, Gregoire      | CENATRIN   |
| Quedraogo, Nabassour | TWIS Training Consultant   |

Dori

|                    |   |
|--------------------|---|
| Dicko, Idrissa     | Dori TWIS Director                                |
| Ousmane, Ba        | Accountant  |
| Dicko, Dembo       | Agronomy Trainer                                  |
| Cisse, Abdou Boulo | Literacy/Audio Visual Aids Trainer                |
| Wallick, Nancy     | USAID Researcher                                  |
| Adizatou, Cisse    | Extension Agent - Oulo/Peokouy                    |
| Toure, Soumailye   | Extension Agent - M'Banga/Windou                  |
| Tambora, Animatou  | Extension Agent - Ouro Aidou                      |
| Dicko, Diemattou   | Extension Agent - Katirga/Kampiti                 |
| Dicko, Pendo       | Extension Agent - Bouloi/Koria                    |
| Hosseini, Tambora  | Extension Agent - Oulo/Peokouy                    |
| Ly, Amadou         | Extension Agent - M'Banga/Windou/<br>Bouloi/Koria |
| Ba, Ousmane        | Extension Agent - Ouro Aidou/Katirga/<br>Kampiti  |

40 Women in Village Group in village of Oulo.

## Annex B.

TWIS LOAN REQUESTS RECEIVED BY EXTENSION AGENTS AS OF OCTOBER 2, 1980

| Loan Purpose           | No. of GVs | Names of villages                                  | Ave No. in GV | Ave Loan Amount | Things to be bought with loan   |
|------------------------|------------|--|---------------|-----------------|---|
| Sheep                  | 5          | Peokouy, Ouro Aidou, Katirga, Bouloi, Koria        | 9             | 305,000         | Animals, feed, veterinary supplies, traditional fence, shelter, water |
| Spinning cotton thread | 5          | Oulo, Banga, Windou, Bouloi, Koria                 | 13            | 125,000         | Raw cotton, carding comb, spinning tool and transport of raw cotton.  |
| Weaving blankets       | 3          | Banga, Windou, Ouro, Aidou                         | 18            | 123,700         | Thread, labor (men hired by women to weave), travel to buy thread.    |
| Grass mats             | 1          | Oulo   | 45            | 150,000         | Grass, fiber, Dye, travel to buy grass.                               |
| Millet, stalk mats     | 1          | Oulo   | 15            | 50,000          | Leather, travel to market product                                     |
| Embroiderie            | 1          | Windou   | 19            | 200,000         | Thread, needles, crayons, paper, travel                               |
| Leather tanning        | 1          | Bouloi   | 4             | ?               | Hides, wood tanning, product stone, lye, pots, travel                 |
| Soap making            | 1          | Bouloi   | ?             | ?               | Oil, lye, wood  |
| Small business         | 5          | MOSTLY BOUTIQUE AND RESTAURANT TYPE OF ENTERPRISES |               |                 |   |
| (couscous)             | (3)        | Peokouy, Banga, Koria                              | ?             | ?               | Grain, salt, spices, pots, wood                                       |
| (akassa balls)         | (3)        | Keokouy, Banga, Katirga                            | ?             | ?               | Millet, wood, pots, sugar   |
| (cola nuts)            | (3)        | Peokouy, Katirga, Bouloi                           | ?             | ?               | Cola nuts   |
| (millet cakes)         | (2)        | Banga, Katirga                                     | ?             | ?               | Millet, oil, spices, sugar, wood                                      |
| (salt)                 | (2)        | Banga, Katirga                                     | ?             | ?               | pots, dipper  |
| (peper)                | (2)        | Banga, Katirga                                     | ?             | ?               | salt, travel  |
| (spices)               | (1)        | Peokouy  | ?             | ?               | peper, travel   |
| (sorrill sauce)        | (3)        | Banga, Bouloi, Koria                               | ?             | ?               | spices, travel  |
| (peanut sauce)         | (1)        | Bouloi   | ?             | ?               | sorrill, potash, pots, wood   |
| (millet mush)          | (1)        | Bouloi   | ?             | ?               | peanuts, pots, wood   |
| (tobacco)              | (1)        | Peokouy  | ?             | ?               | millet, pots, wood  |
| 9 Purpose              | 23         | 9 villages   |               |                 | tobacco, travel   |

ANNEX C

TWIS EXISTING PROCEDURE FOR GETTING A LOAN

- Borrower completes request form (Annex D).
- Village Committee gives general approval.
- Extension agent does feasibility study (Annex E).
- Village Committee reviews feasibility study and gives final approval of loan.
- Request plus feasibility study go to TWIS.
- Director of TWIS (in Dori) has Dori staff review the request.
- Based on opinions of Dori staff, Director recommends approval of request.
- Request goes to USAID/TWIS project manager for approval.
- National Director reviews request and writes check in Ouaga.
- TWIS accountant cashes check in Ouaga and takes cash to Village Committee.
- Village Committee gives money to borrower.
- Borrower signs a receipt (annex F).
- Loan contracts (annex G) are signed at the same time by borrower/Village Committee, extension agent and TWIS accountant.

PROJET "FORMATION DES FEMMES  
DANS LE SAHEL"

DEMANDE DE PRET/FINANCEMENT

- A) Village de ..... Nom de l'Agent Responsable .....
- B) N° et Nom de l'Emprunteuse ..... ou N° et nom de la responsable du  
groupement .....
- N° de la fiche de crédit .....
- Nombre d'adhérents dans le groupement .....
- Filles
- Femmes
- C) Nature de l'activité à financer .....
- Apport personnel du groupement ou de l'emprunteuse .....
- a) en nature .....
- b) en espèce .....

| Montant du prêt | Taux | Durée | Intérêts produits | Montant total à rembourser |
|-----------------|------|-------|-------------------|----------------------------|
|                 |      |       |                   |                            |
|                 |      |       |                   |                            |
|                 |      |       |                   |                            |

- Mode de remboursement .....
- Avis de l'Agent Responsable .....
- Avis du comité villageois .....
- Avis du Directeur ou de son remplaçant .....
- .....

- D) Décision du comité de prêt  
Date et Signature
- Approuvé
- Refusé
- Raisons du refus
- Garanties
- Caution
- Excès d'activités
- Autres observations .....
- .....

PROJET "FORMATION DES FEMMES  
DANS LE SAHEL"

QUESTIONNAIRE - ETUDE DE FACTIBILITE

Nom de village .....  
 Nom de l'Agent Responsable ..... Fonction .....  
 Activité à financer .....  
 Nom de l'Emprunteuse ..... ou nombre de personnes dans le groupement  
 ..... (joindre liste)

- 1) Montant du prêt (en chiffres et en lettres) .....
- 2) Quelle est la contribution en espèces et en nature de l'Emprunteuse ou du groupement au financement de cette ou de ces activités .....
- 3) Est-ce que l'emprunteuse ou le groupement a d'autres sources de revenus suffisant pour rembourser le prêt ? (cotisations, champs collectifs, commercialisation etc... ..)
- 4) Est-ce que l'emprunteuse ou le groupement a besoins de concours dans le cadre de l'activité ou des activités à financer ? Si oui, quel(s) genre(s) ? .....
- 5) L'emprunteuse ou le groupement a-t-elle ou a-t-il d'autres prêts ? .....  
 ..... Si oui, remplissez le tableau.

| Date | Montant | Taux d'intérêts | Durée | Montant total à rembourser | Montant déjà remboursé | Reste à rembourser | Montant de l'échéance à venir |
|------|---------|-----------------|-------|----------------------------|------------------------|--------------------|-------------------------------|
|      |         |                 |       |                            |                        |                    |                               |
|      |         |                 |       |                            |                        |                    |                               |
|      |         |                 |       |                            |                        |                    |                               |

- 6) Est-ce que les revenus prévus de l'activité à financer, sont suffisamment viables pour rembourser le prêt à temps ? .....
- 7) De qui est venue l'idée du prêt ? .....
- 8) L'activité sera-t-elle génératrice de bénéfices ? .....  
 ..... Si oui, à quoi serviront ces bénéfices à part le remboursement du prêt ? .....
- 9) L'emprunteuse est gérante ou qui est gérante (dans le cas d'un groupement) ? .....
- 10) A-t-elle une bonne renommée et la compétence technique requise pour la faire fonctionner ? .....
- 11) Quelle formation spécifique faut-il pour faire fonctionner l'activité ? .....
- 12) L'emprunteuse ou les emprunteuses aura-t-elle ou auront-elles le temps requis pour se consacrer à l'activité en dehors de ses ou de leurs obligations, de ses occupations ou de leurs occupations ? .....
- 13) Quelle est la participation effective (dans le cas d'un groupement) de chaque membre ? .....

DATE ET SIGNATURE DE L'AGENT RESPONSABLE

DORI (HAUTE-VOLTA)

N° C00001

JUSTIFICATIF DE CREDIT

(Bénéficiaire) Je Soussigné (e) M .....  
Certifie avoir reçu du Projet Formation des Femmes dans le Sahel  
La Somme de (en lettres) .....  
.....  
(en chiffres) 

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

  
(RAISONS) pour .....  
.....  
.....  
Ce jour ..... à .....

|  |   |
|--|---|
| Classification   |   |
| N° Fiche de Crédit   |   |
| Règlement autorisé par<br>autorité compétente<br>.....<br>.....<br>..... | Je Comptable<br>.....<br>.....<br>.....<br>.....<br>..... |
| Date et Signature du Bénéficiaire  |   |

ANNEXE II

N° de la Fiche  
de Credit .....

N° 000101

REPUBLIQUE DE HAUTE-VOLTA  
MINISTERE DES AFFAIRES SOCIALES  
ET DE LA CONDITION FEMININE

ANNEXE G

Intérêt 8%

PROJET FORMATION DES FEMMES  
DANS LE SAHEL -- DORI --

Date concession du Crédit  
.....

FICHE INDIVIDUELLE DE CREDIT

Village de .....

BENEFICIAIRE: Nom de la Responsable ..... Prénom(s).....Age:.....

N°du groupement ou de l'emprunteuse .....

| DETAIL DU PRET (ou Montant) | Montent | Je soussigné .....                             |
|-----------------------------|---------|--|
| 1. ....                     | .....   | reconnais avoir reçu la somme de .....         |
| 2. ....                     | .....   | .....  |
| 3. ....                     | .....   | ou le matériel .....                           |
| 4. ....                     | .....   | correspondant à la somme de .....              |
| 5. ....                     | .....   | ci-contre. Je m'engage à rembourser la         |
| 6. ....                     | .....   | totalité dans les délais convenus ci-dessous   |
|                             |         | d'un commun accord avec l'agent du Projet      |
|                             |         | P.F.F.S.                                       |
|                             |         | Signature,                                     |
| Total demandé .....         | .....   | L'Agent qui délivre le crédit et qui a fait    |
| Intérêts .....              | .....   | prendre connaissance au bénéficiaire ci-dessus |
| Total Général .....         | .....   | des conditions de remboursement,               |
| Apport Personnel .....      | .....   | Nom ..... Signature,                           |
| . Espèces .....             | .....   |  |
| . Nature .....              | .....   | Le(a) président(e) du comité villageois qui    |
|                             |         | reconnait au titulaire le droit d'accès au     |
|                             |         | crédit ci-contre.                              |
|                             |         | Nom ..... Signature,                           |

ECHANCIERS DES ENCAISSEMENTS

| Date des Echéances | Prévis. |       |       |       |       | TOTAL des Remboursements |
|--------------------|---------|-------|-------|-------|-------|--------------------------|
| .....              | .....   | ..... | ..... | ..... | ..... | .....                    |
| Montant            |         |       |       |       |       |                          |

A remplir au moment de l'encaissement

| Reçu    | N°.....<br>Date..... | N°.....<br>Date..... | N°.....<br>Date..... | N°.....<br>Date..... | N°.....<br>Date..... |
|---------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Montant |                      |                      |                      |                      |                      |
| Reçu    | N).....<br>Date..... | N°.....<br>Date..... | N°.....<br>Date..... | N°.....<br>Date..... | N°.....<br>Date..... |
| Montant |                      |                      |                      |                      |                      |

A remplir par le PROJET

| Montant dû (ou restant) | Correct. Echéance |  |  |  |  |
|-------------------------|-------------------|--|--|--|--|
| Int. Annuel +           |                   |  |  |  |  |
| Cumul =                 |                   |  |  |  |  |
| Versement               |                   |  |  |  |  |
| Annuel =                |                   |  |  |  |  |
| Solde pr report =       |                   |  |  |  |  |

26

## Annex H.

### CRITERIA TWIS AGENTS COULD USE TO CLASSIFY GV'S AS STRONG OR WEAK

- Minimum of one year of existence as an active GV.
- Stable number of at least 10 members over life of GV.
- Successful completion of at least one activity (e.g. collective field).
- Members have a reputation in the village for repaying their debts on time.
- Balance in treasury growing steadily (even though it may be small).
- Cohesion, understanding, and confidence among members.
- Democratic procedures used in reaching decisions.
- Active, dynamic and honest set of officers in whom other members have confidence.
- GV cooperates with TWIS agents, but can work without TWIS assistance and can survive changes in TWIS personnel.
- All members participate in each GV activity.
- Collective field of at least 1 hectare.
- Officers have a sense of business management.

Annex I.

RECOMMENDED CRITERIA BY WHICH VILLAGE COMMITTEES MIGHT JUDGE TWIS  
LOAN REQUESTS

1. The borrower should earn enough profit from this project to both repay the loan and build a reserve with which to start another investment project.
2. The project should supplement (not replace) borrowers regular source of income
3. The project should directly or indirectly increase food production.
4. The project should directly or indirectly improve nutrition of the village.
5. The project should provide social and economic benefits to all villagers.
6. The project should help to solidify the village.
7. The project should not cause problems to other villagers.
8. The project should serve as a demonstration to others.
9. Profit from the project should stay in the village.
10. The project should compliment other projects.
11. The project should have strong horizontal and vertical (both forward and backward) linkages thus allowing the investment to have a multiple economic impact.
12. The project should help strengthen the role of the village committee.
13. The borrowers should have a reputation of good character among villagers who know them.
14. The borrowers should have good personal relationships with their families and neighbours.
15. The borrowers should have good work habits.
16. The borrowers should have no other debts outstanding.
17. The borrower must have a plan of work and budget worked out for this project.
18. The borrower must demonstrate an ability to foresee the problems that could arise with this project.
19. The borrower must have been trained to do the work of this project.
20. The borrower should be one who works well with TWIS extension agents.

21. The project should draw on existing TWIS expertise rather than need expertise not currently found within TWIS.
22. The project should provide the borrowers with training in business management and accounting so that they can apply to other business activities.
23. TWIS technical services to the projects should be given in a way that the borrowers themselves will learn the techniques and grow out of their dependence on TWIS technical assistance.
24. Loan purpose should not conflict with local religion.
25. Loan purpose should conform to local caste lineage of the borrower.

Annex J.

RECOMMENDED PROCEDURES FOR GETTING A TWIS LOAN

1. Persons wishing to request a loan should discuss it with their village committee.
2. Village committee should judge the request according to its own criteria (see example in Annex I).
3. Upon favorable decision of the village committee, the borrower completes the "Loan request/feasibility study for a TWIS loan" (Annex K).
4. TWIS staff in Dori considers the loan request.
5. Upon favorable decision of TWIS staff in Dori the loan is given directly if 200,000 F.CFA or less.
6. For loans larger than 200,000, the USAID project manager must also concur, and for loans larger than 1,000,000 F.CFA, the National Director of Women's Affairs must also concur.
7. Loans should be distributed by TWIS Director in Dori or by someone he has designated. Distribution should be done in the presence of the Village Chief.
8. Loan recipients should sign a receipt at the time they receive the money and sign a loan contract (Annex G.)

Annex K.

RECOMMENDED LOAN REQUEST/FEASIBILITY STUDY FOR A TWIS LOAN

Date: \_\_\_\_\_

Information about the borrower:

Village: \_\_\_\_\_

Name of GV or individual  
requesting this loan: \_\_\_\_\_

Names of all persons responsible for  
repayment of this loan (continue list  
on back of this form, if necessary) : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Did the village committee approve this  
borrower by using its own criteria? \_\_\_\_\_  
\_\_\_\_\_

What action will the village committee  
take if a loan is not repaid on time? \_\_\_\_\_  
\_\_\_\_\_

Does the TWIS staff in Dori believe  
that this borrower is creditworthy? \_\_\_\_\_  
\_\_\_\_\_

Information about the project:

Loan purpose: \_\_\_\_\_

Loan amount: \_\_\_\_\_ Repayment Schedule: \_\_\_\_\_

Attached a detailed breakdown of how loan will be used. Attach a detailed  
estimation of costs and returns for first year of project.

Did the village committee approve this loan purpose  
by using its own criteria? \_\_\_\_\_

Does the TWIS staff in Dori approve of  
this loan purpose? \_\_\_\_\_

Annex L.

EXISTING PROCEDURE FOR REPAYING A TWIS LOAN

- Borrower pays extension agents and receives receipt in the presence of the Village Committee.
- Agent turns money in to TWIS accountant and gets receipts.
- Money stays in Dori for relending.
- In case of delinquency, extension agent asks Village Committee to meet with borrower to work out a solution.

Annex M.

RECOMMENDED PROCEDURE FOR REPAYING A TWIS LOAN

1. Borrower should be notified in writing of the amount to be repaid and date due at least two months in advance of due date.
2. On due date the borrower should be contacted by the TWIS extension agent.
3. The borrower should make payment to the extension agent in the presence of the Village Chief.
4. The extension agent should write a receipt for payment of the loan from a numbered receipt book at the time payment is received.
5. The extension agent should transfer the loan repayment to the Dori based CNCA cashier and receive a receipt for the money from a numbered receipt book.
6. CNCA should hold the money in a separate TWIS account easily available for relending from Dori without long delays.
7. If a loan is delinquent the TWIS extension agent should, no later than two months beyond the repayment due date, inform the president of the Village Committee and ask the Village Committee to help the delinquent borrower to work out a solution to this problem.

Annex N.

ALTERNATIVE METHODS FOR DETERMINING LOAN REPAYMENT AMOUNTS

Alternative no. 1 : Declining loan repayment amounts

First : Calculate total interest to be paid throughout lifetime of the loan

Second: Set up schedule for repaying loan with each installment amount different (equal installments of principal plus interest on outstanding balance).

Example: 200,000 CFA loan

Term : 3 years with 1 year grace; repayment installments : each 6 months starting with second year.

8% interest on outstanding balance.

First: Calculate total interest to be paid:

|         |               |          |   |        |
|---------|---------------|----------|---|--------|
| 200,000 | for 18 months | at 8%/yr | = | 24,000 |
| 150,000 | for 6 "       | " 8%/yr  | = | 6,000  |
| 100,000 | for 6 "       | " 8%/yr  | = | 4,000  |
| 50,000  | for 6 "       | " 8%/yr  | = | 2,000  |

Total interest to be paid 36,000

Second : Set up repayment schedule :

|                  | Total Principal plus interest to be repaid | Amount to be repaid |          |         | Balance |
|------------------|--|---------------------|----------|---------|---------|
|                  |  | Principal           | Interest | Total   |         |
| End of 18 months | 236,000                                    | 50,000              | 24,000   | 74,000  | 162,000 |
| End of 24 months | 162,000                                    | 50,000              | 6,000    | 56,000  | 106,000 |
| End of 30 months | 106,000                                    | 50,000              | 4,000    | 54,000  | 52,000  |
| End of 36 months | 52,000                                     | 50,000              | 2,000    | 52,000  | 0       |
| <b>Totals</b>    |  | 200,000             | 36,000   | 236,000 |         |

34

Alternative No. 2 : Equal loan repayment amounts

- First : Calculate total interest to be paid throughout lifetime of the loan.
- Second: Divide total amount of interest to be paid by number of loan repayment installment periods.
- Third: Set up schedule for repaying loan with each installment amount equal (equal installments of principal plus equal installments of interest to be paid throughout lifetime of loan).

Example: 200,000 F.CFA loan

Term: 3 years with 1 year grace; repayment installments, each six months starting with second year.

8% interest on outstanding balance.

First: Calculate total interest to be paid:

|                                |          |
|--------------------------------|----------|
| 200,000 for 18 months at 8%/yr | = 24,000 |
| 150,000 for 6 " " 8%/yr        | = 6,000  |
| 100,000 for 6 " " 8%/yr        | = 4,000  |
| 50,000 for 6 " " 8%/yr         | = 2,000  |

Total interest to be paid = 36,000

Second: Divide total interest to be paid by number of loan installments:

$$36,000 \div 4 = 9,000$$

Third: Set up repayment schedule:

| Repayment date   | Total Principal plus interest to be repaid | Amount to be repaid |          |         | Balance |
|------------------|--|---------------------|----------|---------|---------|
|                  |  | Principal           | Interest | Total   |         |
| End of 18 months | 236,000                                    | 50,000              | 9,000    | 59,000  | 117,000 |
| End of 24 months | 177,000                                    | 50,000              | 9,000    | 59,000  | 118,000 |
| End of 30 months | 118,000                                    | 50,000              | 9,000    | 59,000  | 59,000  |
| End of 36 months | 59,000                                     | 50,000              | 9,000    | 59,000  | 0       |
| <b>TOTAL</b>     |  | 200,000             | 36,000   | 236,000 |         |

Alternative no. 3: Method for determining equal approximate repayment amounts.

The loan repayment amount should be equal for each repayment period. The repayment period can be any regular time period (e.g. once per month or once per year). The information needed to calculate the approximate amount to be repaid at the end of each time period is:

- A - The loan amount actually given to the borrower. This is the face value of the loan minus the down payment deposited by the borrower when receiving the loan.
- B - The annual rate of interest.
- C - The full time period of the loan (stated in number of years).
- D - The frequency of repayment.
- E - The number of payment periods in the full life of the loan.

A formula for determining the approximate repayment amount is:

$$\text{Approximate amount to be repaid at the end of each repayment period} = \frac{\left\{ \text{Loan amount} + \frac{\text{loan amount} \times \text{annual interest rate} \times (\text{number of years} + 1)}{2} \right\}}{\text{Number of payment periods}}$$

Examples: Following is the basic information on two examples, a cereal bank loan and a boutique loan:

|   | <u>Cereal bank</u>              | <u>Boutique</u>                |
|---|---------------------------------|--------------------------------|
| A. Face value of loan                               | 900,000                         | 200,000                        |
| Down payment  | 72,000                          | 16,000                         |
| Loan amount borrowed                                | 828,000                         | 184,000                        |
| B. Annual interest rate                             | 8%                              | 8%                             |
| C. Full time period of loan                         | 5 years                         | 5 years                        |
| D. Frequency of repayment                           | annually (without grace period) | monthly (without grace period) |
| E. Number of repayment periods in full life of loan | 5                               | 60                             |

Using the formula on the information above gives:

1. Cereal bank:

Approximate  
amount to  
be repaid  
at end of  
each year

$$\begin{aligned} &= \frac{828,000 + \frac{828,000 \times 8\% \times (5+1)}{2}}{5} \\ &= \frac{828,000 + 198,720}{5} \\ &= 205,344 \\ &\approx 210,000 \end{aligned}$$

2. Boutique:

Approximate  
amount to  
be repaid  
at end of  
each month

$$\begin{aligned} &= \frac{184,000 + \frac{184,000 \times 8\% \times (5+1)}{2}}{60} \\ &= \frac{184,000 + 44,160}{60} \\ &= \frac{228,160}{60} \\ &= 3,803 \\ &\approx .000 \end{aligned}$$



REPUBLIQUE DE HAUTE-VOLTA

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MINISTERS DES AFFAIRES SOCIALES ET  
DE LA CONDITION FEMININE

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PROJET FORMATION DES FEMMES DANS LE SAHEL

Unité - Travail - Justice

-----

Village de .....  
Nom et Prénom(s) de l'encadreur ou de  
la monitrice .....  
Période .....19..

BULLETIN DE CONTROLE MENSUEL

| Dates | N°grou-<br>pement | N°fiche<br>crédit | Nom de la<br>respons. | Nature de<br>l'activité | Durée | Montant<br>total | Intérêt | Montant<br>total à<br>rembours. | Montant<br>déjà<br>rembours. | Montant<br>restant à<br>rembourser |
|-------|-------------------|-------------------|-----------------------|-------------------------|-------|------------------|---------|---------------------------------|------------------------------|------------------------------------|
|       |                   |                   |                       |                         |       |                  |         |                                 |                              |                                    |

ANNEXE P

THE COMPUTER -- AN APPROPRIATE TECHNOLOGY  
FOR MANAGING A VIABLE AGRICULTURAL  
CREDIT SYSTEM IN A LOW INCOME  
COUNTRY -- UPPER VOLTA

by

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Paper presented at the 1980/American Agricultural Economics Association Annual Meeting, Urbana-Champaign, Illinois, July 27-30, 1980.

## INTRODUCTION

The Integrated Rural Development Program is an Agency for International Development sponsored project in the Eastern Regional Development Organization (ORD) of Upper Volta. The program is one of many that was implemented in the Sahel following the drought of 1970-73 in an effort to increase agricultural production and improve the quality of life in the rural areas where most of the population lives.

One aspect of this AID/IRD project was the introduction of animal traction to replace the hoe cultivation method used in the Eastern ORD. The author was given the responsibility of developing a technique for managing the agricultural credit system that would support this animal traction program.

The choice of the appropriate technology for managing the credit system was made by assessing the problems facing the existing system and then considering the alternative techniques for solving these problems in light of the resources available.

## PROBLEMS FOUND IN THE AGRICULTURAL CREDIT SYSTEM IN THE EASTERN ORD

Problems found in the Eastern ORD's credit system were of two types; those concerned with the central administration of the system and those concerned with the operation of the system at the field level.

At the administrative level an inviable credit system faced a steadily eroding portfolio. This erosion was curtailed temporarily by new injections of capital from various programs of foreign assistance. Funding came from many sources each of which demanded detailed statistical reporting, often on short notice. Portfolios of loans and loan repayments were incomplete and disorganized. There was a high incidence of errors and omissions in recording loan repayments. Procedures for collecting loans were unclear and irregular. The credit and cooperation section was unable to furnish basic statistical reports. The clerical staff had poorly organized and inefficient work habits.

In the field, loan repayment rates were weak -- an average of only 30 per cent of loans due was collected per year from 1976 to 1980. Borrowers did not understand clearly the terms and conditions of their loans. Records of repayment kept at the level of the extension/credit agents in the field were inconsistent with those kept at the headquarters level. These field level extension/credit agents were poorly organized and poorly motivated in their loan collection responsibilities. Embezzlement of loan repayments by

.../...

these extension/credit agents and their supervisors ran high. Productivity of capital invested through this agricultural credit system was low due to weak technical assistance from the extension/credit agents. A high rate of reassignment of field level extension/credit agents from one post to another created difficulty in maintaining continuity from one year to another in loan collections, recordkeeping and reporting.

Based on these problems a search began for a management technique that would help solve them.

### CHOOSING AN APPROPRIATE TECHNOLOGY FOR MANAGING A VIABLE AGRICULTURAL CREDIT SYSTEM

In 1977 and 1978 piecemeal efforts were made to improve the labor-intensive management techniques that had been developed since 1974 when the credit program began in the Eastern ORD. Loans and loan repayments were all registered by hand. Efforts were made to improve the old system of hand filing loan forms and records of repayment. Some of the demands for statistical information were met by using tedious, slow, error-prone, hand methods of tabulation. In an effort to establish a complete set of basic data on the animal traction medium term credit portfolio, a complete inventory of borrowers of animal traction credit was made in the fall of 1978. An effort to motivate borrowers to repay their loans was made through appeals by radio and in mass meetings. In the name of patriotism and personal honor, efforts were made to convince extension/credit agents and their supervisors not to embezzle loan repayments they had collected from borrowers.

Though these efforts were not without success, they fell short of the mark of establishing a management technique that would produce a viable agricultural credit system. As this became clear the possibility of establishing a computerized system of management was considered. The possibility of having the management tools produced quickly, regularly, and accurately by the computer led to the decision to introduce a computerized system of management designed to solve the problems stated above and to meet the objectives listed below.

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1 "Inventaire de Crédit Rural Traction Animale" by Amidou Dahany, Sinare Moussa, Thina Jonas, Yoni Lebene, Edouard Tapsoba, and Thomas Stickley, Bureau de Développement Communautaire, Organisme Régional de Développement de l'Est, Fada N'Gourma, Upper Volta, November 1978.

## OBJECTIVES OF THE COMPUTERIZED SYSTEM

The decision was made to design a computerized system of management that would meet the following objectives :

1. To produce regular, accurate, and rapid statistical reports on the number and amount of loans and loan repayments by sector of the ORD, by loan purpose, and by source of funding.
2. To improve loan repayment rates.
3. To improve the productivity of ORD employees.
4. To improve the productivity of investments made with capital distributed through the agricultural credit system.
5. To achieve viability of the agricultural credit system, that is a self-supporting credit system in which revenue exceeds the costs of operation.

## INSTALLATION OF THE COMPUTERIZED SYSTEM

### A. Preparatory Steps

The process of installation of this computerized system began with the following preparatory steps :

1. In November 1978, administrators and programmers of the National Data Processing Center (CENATRI) of Upper Volta met with the Eastern ORD to discuss the problems to be solved and the objectives of the system to be met.
2. The Eastern ORD and CENATRI produced a plan of work for installing the system.<sup>1</sup>
3. Twenty-nine different programs were written by CENATRI programmers in COBOL (Computer Business Oriented Language) to classify, aggregate, and analyze basic statistical data.
4. All short-term and medium-term loans were classified by year and by village since the ORD credit program began in 1974.
5. Basic data codes, code indexes, and coding forms were developed.

.../...

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<sup>1</sup> "Cahier de Charges pour la Gestion Automatisée des Crédits Agricoles" by Thomas Stickley, Hamidou Bahani, Etienne Ouedraogo, and Oumarou Tiemtore, Centre National de Traitement de l'Information, B.P. 1132, Ouagadougou, Upper Volta, February 1980.

6. Data coders were trained.
7. Preliminary coding was done for use in testing the program.
8. The 29 programs were tested and refined using the computer facilities of CENATRIN in OuagaCougou.

#### B. Continuous Operations

Following these preliminary steps, the following continuous operations were started :

1. Coding of all 3821 short-term and medium-term loans given from 1974 through 1979.
2. Coding of all loan repayments received since 1974.
3. Verification and correction of coding.

#### INPUT AND OUTPUT OF THE COMPUTERIZED SYSTEM

Following are the input and output of the computer used in the system.

##### A. Input

##### 1. Nature of the Input

The input is of two types : the input needed to establish the system and the input provided on a continuous basis.

##### a. Input to Establish the System

Twenty-nine programs were entered into the computer to register the basic data (6 programs), to produce annual and semi-annual output (18 programs), to produce quarterly output (3 programs), and to list basic data codes (2 programs).

Basic data codes were also entered into the computer to identify loan types, loan terms, loan purposes, borrowers, borrowers' villages, and sources from which funds were received.

##### b. Input Provided Continuously

As new loans are disbursed they are coded and entered into the computer. Likewise all repayments received are coded and entered.

##### 2. Input Schedule

Input is fed into the computer on the following schedule which conforms to the loan disbursement period (January 1 through September 30) and the loan repayment period (which is continuous but has a common due-date for the repayment of all loans of March 31).

a. Input to establish the system was fed into the computer at the beginning of the program in 1979 but can be added to or changed at any time.

.../...

b. New loans are coded as disbursed and code sheets are accumulated throughout the lending season (January 1 through September 30). These are then punched into the computer in October each year after the close of the lending period on September 30.

c. As loan repayments are received they are coded immediately and punched into the computer quarterly (or more often if repayment activity is intense).

## B. Output

### 1. Nature of the Output

The output produced is of three types : statistical reports, aids to field extension/credit agents in doing their jobs, and calculation of commissions to be paid to extension/credit agents based on loan repayments received.

#### a. Statistical Reports

Statistical reports are produced on number of loans made, number of persons benefiting from loans, amount of money loaned, amount of loan repayments received as a percentage of loan repayments due, number of delinquent borrowers as a percentage of all borrowers with loan repayments due, and list of uncollectable loans to be written off. These reports are broken down by fiscal year, sector of the ORD, factor of production (loan purpose), and source of funding.

#### b. Aids to Field Extension/Credit Agents in Doing Their Jobs

The following output is produced to help the extension/credit agents do their jobs more efficiently : bills to borrowers, list of these bills, lists of live loans, lists of overdue loans, lists of paid-off loans, lists of borrowers who were overcharged/undercharged interest according to date repayments were made, loan repayment control sheets, monthly reports of loan repayments received, lists of borrower identification numbers already assigned, and lists of village identification numbers already assigned.

#### c. Calculation of Commission to be Paid to Extension/Credit Agents Based on Loan Repayments Received

To encourage extension/credit agents to give and collect more sound (productive) loans, commissions are calculated (at the rate shown in Table 1) and produced as the output of the system.

.../...

TABLE 1

CALCULATION OF COMMISSIONS TO BE PAID TO AGENTS  
BASED ON LOAN REPAYMENTS RECEIVED

| Type of Commission  | Extension/<br>Credit<br>Agent | Sub-<br>Sector<br>Chief | Sector<br>Chief | Chief of<br>Credit and<br>Cooperation<br>Section in<br>Each Sector |
|---|-------------------------------|-------------------------|-----------------|--|
| (Percentage of Money Collected)   |                               |                         |                 |  |
| a. Base commission on all loans collected   | 1.5%                          | 0.1%                    | 0.10%           | 0.10%  |
| b. Supplemental commission for collection of loan installments not yet due                                | 0.8%                          | 0.2%                    | 0.05%           | 0.05%  |
| c. Supplemental commission for overdue loans collected  | 0.5%                          | 0.2%                    | 0.05%           | 0.05%  |
| d. Supplemental commission for collection of 100% of loan installments due                                | 0.5%                          | 0.2%                    | 0.05%           | 0.05%  |
| e. Supplemental commission if at least 100 persons were served by the credit system in an extension unit. | 0.5%                          | 0.2%                    | 0.05%           | 0.05%  |

An extension/credit agent in the Piela extension unit, for example, received a commission of 6443 FCFA for the 1979-80 fiscal year. This amounted to about 2 percent of his annual salary of approximately 300,000 FCFA.

## 2. Output Schedule

The computer output is produced on the following schedule which is built around the farm production season (May through September) and the government's fiscal year (April 1 through March 31) :

- a. Once per year in October :
  - List of live loans.
  - Bills for each borrower.
  - List of these bills.
  - List of borrower identification numbers already assigned.
  - List of village identification numbers already assigned.
  - Number and value of each factor of production sold on credit.
  - Number of loans made and amount loaned.
- b. Once per year in April :
  - Loan repayment statistics.
  - List of paid-off loans.
  - Statements of underpaid/overpaid interest on paid-off loans.
  - List of these statements.
  - List of loans to be removed from the computer registry because they have been paid-off for more than ten years.
  - Calculation of all commissions to be paid to agents.
- c. Twice per year in April and October :
  - Loan repayment control forms.
  - List of overdue loans.
  - List of uncollectable loans.
- d. Once quarterly (in January, April, July, and October, or more often if necessary) :
  - Status of loan repayment activity.

.../...

## EVALUATION

Evaluation of the computerized system is done here on the basis of the objectives to be met.

1. Regular and accurate statistical reports of the number and amounts of loans and loan repayments are produced by sector of the ORD, factor of production (loan purpose), and source of funding. This objective has been satisfied.
2. Loan repayment rates are expected to improve as a result of the effect of several aspects of the computerized system. The bills sent to each borrower reminds them of the amount due to be repaid and the date it is due. Embezzlement by agents is controlled by the pressure put on these agents by borrowers who receive bills for loans they have already repaid. The prospect of being paid a commission which is a percentage of loans collected serves as an incentive to these agents to increase these loan collections. When borrowers are given their bills the agents are given a listing of these bills. This listing helps the agents organize their job of collecting loan repayments.
3. Productivity of ORD agents has improved. At the administrative level among the clerical staff this improvement has been the result of fewer, simpler and more clearly defined duties and the computerized control of mistakes. At the field level, productivity of agents has improved resulting from incentive commissions based on loan collections and improved knowledge of loan portfolios in each extension unit from the lists of live loans, lists of loan payments due, lists of overdue loans, lists of paid-off loans and monthly reports of loan repayments received.
4. Productivity of capital invested in agriculture through the credit system seems to have improved from the increased incentives of field extension/credit agents to give more and sounder loans in order to receive a higher commission on loan collections and the pre-loan economic analysis of loan purpose already being used by extension/credit agents.
5. Viability of the credit system was improved as the result of improved repayment rates, improved productivity of the ORD staff and improved information from statistical reports for use in evaluation, financial analysis, and budgeting of the rural credit account.

Though a meaningful cost-benefit analysis of the computerized system cannot be done before the system has functioned for two years, some of the elements of such an analysis have started to emerge.

- a. Additional costs of the computerized system compared to the old system include : (1) fixed costs : the Eastern ORD's share of the cost of writing the 29 programs (about \$ 12,000), training coders (about \$500), ORD staff time used in installing the system (about \$1,000) and training agents in the field to use the computerized system (about \$1,500) --

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48

this makes a total of about \$ 15,000 as the fixed cost of installing the system; and (2) variable costs : registration of loans, registration of repayments, computer time to produce bills, lists, commissions and statistical reports, and paper, printing, and binding -- this amounts to roughly \$ 2.00 per loan registered which is based on the variable costs associated with the original 3821 loans registered -- due to the economies of scale, this cost will go down as number of loans registered increases.

b. Additional benefits that should be measured in this analysis are : increased repayments, decreased embezzlement, increased speed and accuracy with which statistical reports are produced, increased productivity of capital invested through the credit system; and reduced costs resulting from discontinuing the annual inventory of credit at the field level.

c. The following items were unchanged by the system and therefore would not be included in the cost-benefit analysis : number of persons employed for the agricultural credit system; logistical support for the credit system (office space, office furniture, vehicles, and travel costs); and basic loan contract forms and receipts used by field level extension/credit agents.

#### RECOMMENDATIONS

Following are recommendations suggested for others installing such a computerized technique for managing a viable agricultural credit system in a low-income country.

1. The purpose and objectives of the computerized system of management should be kept simple at first. Inclinations toward adding tasks to the computer program which could complicate the system must be overcome in the early stages of its development. Tasks can be added later after the original simplified program has been thoroughly tested and tried.
2. Even though the distance between computer programmers and users of the program may be great, close communication between these two parties must be maintained during the time programs are being written and tested.
3. Procedures must be clear and simple for registering loans, registering repayments, correcting mistakes, and making changes in the basic data in order to sustain frequent reassignments of ORD personnel at all levels.
4. Stress thoroughness, regularity, accuracy, and punctuality in training of clerical staff dealing with the program.
5. Coding should not begin before basic data to be coded is complete and classified, and borrowers have been assigned mutually exclusive beneficiary numbers.
6. Bills should not be distributed to borrowers by the extension/credit agents suspected of having embezzled repayments asked for by those bills. Credit and cooperative chiefs in each sector should distribute these bills.

.../...

7. Local facilities for key-punching, computer programming, and data processing must be of sufficient quality (this is clearly sufficient in Upper Volta).

#### CONCLUSIONS

A computerized system for managing a viable agricultural credit system in a low-income country -- Upper Volta -- was chosen over alternative labor-intensive methods to gain speed, accuracy, regularity and thoroughness in production of the statistical reports, aids to field staff and calculation of commissions.

Based on the evaluation (presented above) of the experience of one year, the system has been successful in reducing the problems discussed earlier in this paper.

Even in low income countries which are using the agricultural credit system to introduce the earliest steps of agricultural development -- for example, moving from the hoe to a donkey and plow, as in the Eastern ORD of Upper Volta -- the computer can be the most appropriate technology for managing a viable agricultural credit system.

## COMPTÉ DE PRÉT TWIS

(Niveau de siège TWIS)

GV :

VILLAGE :

OBJET DU PRÉT : BANQUE DE CÉREALES

| DATE    | CREDIT  | I N T E R E T  |                   |                     |                  |                  | REMBOUR-<br>SEMENT | SOLDE   |
|---------|---------|----------------|-------------------|---------------------|------------------|------------------|--------------------|---------|
|         |         | Taux<br>par an | Montant<br>par an | Montant<br>par jour | Nbre de<br>jours | Montant<br>total |                    |         |
| 11.2.80 | 200.000 |                |                   |                     |                  |                  |                    | 200.000 |
| 29.3.80 |         | 8%             | 10.240            | 28                  | 46               | 1.288            | 72.000             | 128.000 |
|         | 300.000 |                |                   |                     |                  |                  |                    | 129.288 |
| 19.4.80 |         | 8%             | 34.343            | 94                  | 21               | 1.974            |                    | 429.288 |
|         | 300.000 |                |                   |                     |                  |                  |                    | 431.262 |
| 1.10.80 |         | 8%             | 58.501            | 160                 | 165              | 26.400           |                    | 731.262 |
|         | 100.000 |                |                   |                     |                  |                  |                    | 757.662 |
| 1.3.81  |         | 8%             | 68.613            | 188                 | 161              | 30.265           |                    | 857.662 |
|         |         |                |                   |                     |                  |                  |                    | 887.927 |
| 15.3.82 |         | 8%             | 54.234            | 149                 | 379              | 56.471           | 210.000            | 677.927 |
|         |         |                |                   |                     |                  |                  |                    | 734.398 |
| 11.2.83 |         | 8%             | 41.952            | 115                 | 333              | 38.274           | 210.000            | 524.398 |
|         |         |                |                   |                     |                  |                  |                    | 562.672 |
| 11.2.84 |         | 8%             | 28.214            | 77                  | 365              | 28.214           | 210.000            | 352.672 |
|         |         |                |                   |                     |                  |                  |                    | 380.886 |
| 11.2.85 |         | 8%             | 13.671            | 37                  | 365              | 13.671           | 210.000            | 170.886 |
|         |         |                |                   |                     |                  |                  |                    | 184.557 |
|         |         |                |                   |                     |                  |                  | 184.557            | 0       |
| TOTAL   | 900.000 |                |                   |                     |                  | 196.557          | 1.096.557          |         |

## Annex S,

### FUNCTIONS AN ACCOUNTING SYSTEM SHOULD PERFORM

Borrowers of TWIS loans should keep accounts on enterprises financed from their loans. These accounts should perform the following accounting functions:

1. Present clear and simple image of the business enterprise.
2. Show, at regular time intervals, the profit earned (receipts minus expenses) during the time intervals.
3. Show the cash balance in the account at any point in time.
4. Control the treasury.
5. Control the stock of material.
6. Show the volume of business.
7. Show the revenue that is needed for making regular loan repayments.
8. Draw attention to village store items that earn a low profit.
9. Provide information needed for ordering and replenishing stock of village store items.
10. Show daily interest costs on outstanding loan balance.
11. Justify expenditures.
12. Serve as a training experience for the borrower that could be applicable on future business enterprises.

JOURNAL DE CAISSE DE BANQUE DE CEREALES

(Niveau trésorier de comité et commissaire aux comptes des banques  
de céréales)

G.V. : ..... VILLAGE : .....

| Date    | Libellé                        | Montant<br>reçu | Montant<br>dépensé | Solde   |
|---------|--------------------------------|-----------------|--------------------|---------|
| 10/2/80 | Cotisation des membres         | 72.000          |                    | 72.000  |
| 11/2/80 | Acompte au FDV                 | .               | 72.000             | 0       |
| 11/2/80 | Crédit du FDV                  | 200.000         |                    | 200.000 |
| 12/2/80 | Ventilation acheteur V1        |                 | 50.000             | 150.000 |
| 12/2/80 | " " V2                         |                 | 50.000             | 100.000 |
| 12/2/80 | " " V3                         |                 | 50.000             | 50.000  |
| 12/2/80 | " " V4                         |                 | 50.000             | 0       |
| 29/3/80 | Crédit du FDV                  | 300.000         |                    | 300.000 |
| 21/3/80 | Ventilation acheteur V1        |                 | 25.000             | 275.000 |
| 9/8/80  | Ventes de céréales acheteur V1 | 112.500         |                    | 387.500 |
| 1/3/81  | Remboursement au FDV           |                 | 210.000            | 177.500 |

JOURNAL DE CAISSE DE L'ACHETEUR/VENDEUR DE BANQUE DE CEREALES

(Niveau acheteur/vendeur et commissaire aux comptes)

G.V. : \_\_\_\_\_

Village : \_\_\_\_\_

Nom : \_\_\_\_\_

| Date    | Libellé              | Quantité | Prix unitaire | Montant reçu | Montant dépensé | Solde   |
|---------|----------------------|----------|---------------|--------------|-----------------|---------|
| 12/2/80 | Approvisionnement    |          |               | 50.000       |                 | 50.000  |
| 13/2/80 | Achat de mil de M. Z | 100 kg   | 50            |              | 5.000           | 45.000  |
|         | " M. Y               | 300 kg   | 50            |              | 15.000          | 30.000  |
| 15/2/80 | " M. X               | 600 kg   | 50            |              | 30.000          | 0       |
| 21/3/80 | Approvisionnement    |          |               | 25.000       |                 | 25.000  |
| 25/3/80 | Achat de mil de M. W | 500 kg   | 50            |              | 25.000          | 0       |
| 1/8/80  | Vente de mil à M. Z  | 100 kg   | 75            | 7.500        |                 | 7.500   |
|         | Vente de mil à M. V  | 100 kg   | 75            | 7.500        |                 | 15.000  |
| 2/8/80  | Vente de mil à M. U  | 100 kg   | 75            | 7.500        |                 | 22.500  |
| 3/8/80  | " M. T               | 100 kg   | 75            | 7.500        |                 | 30.000  |
| 4/8/80  | " M. Y               | 100 kg   | 75            | 7.500        |                 | 37.500  |
|         | Vente de mil à M. S  | 100 kg   | 75            | 7.500        |                 | 45.000  |
|         | " M. X               | 100 kg   | 75            | 7.500        |                 | 52.500  |
| 5/8/80  | " M. R               | 100 kg   | 75            | 7.500        |                 | 60.000  |
|         | " M. W               | 100 kg   | 75            | 7.500        |                 | 67.500  |
|         | " M. Q               | 100 kg   | 75            | 7.500        |                 | 75.000  |
| 7/8/80  | " M. V               | 100 kg   | 75            | 7.500        |                 | 82.500  |
| 8/8/80  | " M. P               | 100 kg   | 75            | 7.500        |                 | 90.000  |
|         | " M. O               | 100 kg   | 75            | 7.500        |                 | 97.500  |
|         | " M. N               | 100 kg   | 75            | 7.500        |                 | 105.000 |
| 9/8/80  | " M. M               | 100 kg   | 75            | 7.500        |                 | 112.500 |
|         | Remis au trésorier   |          |               |              | 112.500         | 0       |

**CALCUL DE BENEFICE NET D'UNE BANQUE DE CEREALES**

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(Niveau gestionnaire de banque de céréales et commissaire aux comptes)

G.V. : \_\_\_\_\_ Village : \_\_\_\_\_

PERIODE : du 1er OCTOBRE 1980 au 30 SEPTEMBRE 1981

**RECETTES :**

|                                  |           |           |
|----------------------------------|-----------|-----------|
| Cotisation des membres           | 72.000    |           |
| Ventes de céréales (180 x 7.500) | 1.350.000 |           |
| Total :                          |           | 1.422.000 |

**DEPENSES :**

|   |         |           |
|---|---------|-----------|
| Acompte   | 72.000  |           |
| Achat de céréales (180 x 5.000)                               | 900.000 |           |
| Sacs (180 x 225)  | 40.500  |           |
| Grainage (180 x 50)   | 9.000   |           |
| Transport des céréales (180x 100)                             | 18.000  |           |
| Location du matériel (180 x 200)                              | 36.000  |           |
| Remboursement du crédit (Capital 165.600)<br>(Intérêt 44.400) | 210.000 |           |
| Autres dépenses (achettes, fil, aiguilles,<br>palets)         | 25.000  |           |
| Total :   |         | 1.310.500 |

**BENEFICE NET : (Recettes moins les dépenses) 111.500**

INVENTAIRE DE LA BOUTIQUE

(Niveau gérant de la boutique et commissaire aux comptes)

G.V. : \_\_\_\_\_ Village : \_\_\_\_\_

PERIODE : du 1er SEPTEMBRE 1980 au 30 SEPTEMBRE 1980

| Article    | Inventaire début de période | Nombre reçu | Total | Inventaire fin de période | Nombre vendu |
|------------|-----------------------------|-------------|-------|---------------------------|--------------|
| Savon      | 50                          | 0           | 50    | 38                        | 12           |
| Allumettes | 25                          | 50          | 75    | 34                        | 41           |
| Cigarettes | 20                          | 100         | 120   | 56                        | 64           |
| Pétrole    | 50                          | 200         | 250   | 197                       | 53           |
| Pile       | 120                         | 60          | 180   | 91                        | 89           |
| Sucre      | 25                          | 10          | 35    | 15                        | 20           |
| Riz        | 100                         | 200         | 300   | 91                        | 209          |
| Sel        | 10                          | 20          | 30    | 4                         | 26           |
| Bonbons    | 10                          | 10          | 20    | 9                         | 11           |
| Cube maggi | 5                           | 5           | 10    | 2                         | 8            |

## ANNEX X

## CALCUL DE MONTANT TOTAL DE BENEFICES BRUTS ET MONTANT TOTAL DE VENTE

(Niveau gérant de boutique et commissaire aux comptes)

G.V. : \_\_\_\_\_ VILLAGE : \_\_\_\_\_

PERIODE : du 1er SEPTEMBRE 1980 au 30 SEPTEMBRE 1980

| Article    | Unité  | Prix d'achat unitaire | Prix de vente unitaire | Bénéfice | Nombre vendu | Montant total de bénéfice brut | Montant total de vente |
|------------|--------|-----------------------|------------------------|----------|--------------|--------------------------------|------------------------|
| Savon      | Boule  | 60                    | 70                     | 10       | 12           | 120                            | 840                    |
| Allumette  | Boîte  | 10                    | 15                     | 5        | 41           | 205                            | 615                    |
| Cigarettes | Paquet | 120                   | 140                    | 20       | 64           | 1.280                          | 8.960                  |
| Petrol     | Litre  | 89                    | 115                    | 26       | 53           | 1.378                          | 6.095                  |
| Pile       | Pile   | 50                    | 60                     | 10       | 89           | 890                            | 5.340                  |
| Sucre      | Paquet | 228                   | 250                    | 22       | 20           | 440                            | 5.000                  |
| Riz        | Kilog. | 115                   | 140                    | 15       | 209          | 3.135                          | 29.260                 |
| Sel        | Kilog. | 38                    | 50                     | 12       | 26           | 312                            | 1.300                  |
| Bonbons    | Paquet | 300                   | 500                    | 200      | 11           | 2.200                          | 5.500                  |
| Cube maggi | Boîte  | 1.500                 | 2.250                  | 750      | 8            | 6.000                          | 18.000                 |
| TOTAL      |        |                       |                        |          |              | 15.960                         | 80.910                 |

JOURNAL DE CAISSE DE LA BOUTIQUE

(Tenue par le trésorier de la boutique et contrôlé par le commissaire  
aux comptes)

G.V. : \_\_\_\_\_ VILLAGE : \_\_\_\_\_

| Date    | Libellé                | Montant<br>reçu | Montant<br>dépensé | Solde   |
|---------|------------------------|-----------------|--------------------|---------|
| 16.8.80 | Cotisation des membres | 16.000          |                    | 16.000  |
| 1.9.80  | Acompte au FDV         |                 | 16.000             | 0       |
|         | Crédit du FDV          | 200.000         |                    | 200.000 |
|         | Achat d'articles       |                 | 195.000            | 5.000   |
|         | Frais de transport     |                 | 3.000              | 2.000   |
| 5.9.80  | Ventes d'articles      | 10.565          |                    | 12.565  |
| 9.9.80  | Ventes d'articles      | 9.210           |                    | 21.775  |
| 13.9.80 | Ventes d'articles      | 12.070          |                    | 33.845  |
| 18.9.80 | Ventes d'articles      | 11.415          |                    | 45.260  |
| 25.9.80 | Achat d'articles       |                 | 42.000             | 3.260   |
|         | Frais de transport     |                 | 3.000              | 260     |
|         | Ventes d'articles      | 8.470           |                    | 8.730   |
| 27.9.80 | Ventes d'articles      | 13.680          |                    | 22.410  |
| 30.9.80 | Ventes d'articles      | 15.500          |                    | 37.910  |
|         | Remboursement au FDV   |                 | 4.000              | 33.910  |

CALCUL DE BENEFICE NET DE LA BOUTIQUE

(Niveau trésorier de la boutique et commissaire aux comptes)

G.V. : \_\_\_\_\_ VILLAGE : \_\_\_\_\_

PERIODE : du 1er Septembre 1980 au 30 Septembre 1980

RECETTES :

|                                   |        |        |
|-----------------------------------|--------|--------|
| Montant total des bénéfices bruts | 15.960 |        |
| Total des revenus                 |        | 15.960 |

DEPENSES :

|  |       |        |
|--|-------|--------|
| Salaire  | 3.000 |        |
| Transport et frais de voyage                             | 6.000 |        |
| Remboursement du crédit (Capital 3.100)<br>(Intérêt 900) | 4.000 |        |
| Autres dépenses  | ..... |        |
| Total des dépenses                                       |       | 13.000 |

BENEFICE NET : (revenus moins les dépenses) 2.960

JOURNAL DE CAISSE DE MOULIN  
(Niveau Trésorier et Commissaire aux Comptes)

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Village : ..... G.V. : .....

| Date       | L i b e l l é          | Montant<br>reçu | Montant<br>dépensé | Solde   |
|------------|------------------------|-----------------|--------------------|---------|
| 20.5.1980  | Cotisation des membres | 84.000          |                    | 84.000  |
| 28.5.1980  | Acompte                |                 | 84.000             | 0       |
| 28.5.1980  | Crédit                 | 75.000          |                    | 75.000  |
| 28.5.1980  | Bois                   |                 | 10.000             | 65.000  |
| 28.5.1980  | Toile                  |                 | 15.000             | 50.000  |
| 28.5.1980  | Chevrans               |                 | 5.000              | 45.000  |
| 28.5.1980  | Frais de Transport     |                 | 3.000              | 42.000  |
| 28.5.1980  | Ciment                 |                 | 18.000             | 24.000  |
| 10.6.1980  | Esçon                  |                 | 12.000             | 12.000  |
| 15.10.1980 | Crédit                 | 850.000         |                    | 862.000 |
| 15.10.1980 | Moteur                 |                 | 810.000            | 52.000  |
| 15.10.1980 | Gas oil                |                 | 21.000             | 31.000  |
| 15.10.1980 | Huile                  |                 | 2.000              | 29.000  |
| 15.10.1980 | Tonneau                |                 | 10.000             | 19.000  |
| 15.10.1980 | Bidon                  |                 | 2.000              | 17.000  |
| 16.10.1980 | Transport              |                 | 15.000             | 2.000   |
| 20.10.1980 | Recettes de meunier    | 1.080           |                    | 3.080   |

CALCUL DE BÉNÉFICE NET DE MOULIN

(Niveau Trésorier de Moulin et Commissaire aux Comptes)

Village : \_\_\_\_\_ G.V. : \_\_\_\_\_

Période : du 1er Novembre 1980 au : 30 Novembre 1980

Revenus :

|                  |               |               |
|------------------|---------------|---------------|
| Céréales moulues | <u>45 640</u> |               |
| Total revenus    |               | <u>45 640</u> |

Dépenses :

|                         |               |               |
|-------------------------|---------------|---------------|
| Salaire meunier         | <u>6 000</u>  |               |
| Gas-oil                 | <u>4 000</u>  |               |
| Huile                   | <u>500</u>    |               |
| Pièce de rechange       | <u>4 500</u>  |               |
| Réparateur              | <u>3 000</u>  |               |
| Transport gas-oil/huile | <u>2 500</u>  |               |
| Frais de déplacement    | <u>3 500</u>  |               |
| Remboursement de crédit | <u>20 000</u> |               |
| Autre dépense _____     | _____         |               |
| Total dépenses          |               | <u>44 000</u> |

Bénéfices Nets (revenus moins dépenses) 1 640

Annex CC.

TOPICS TO BE TAUGHT TO GV'S WITH TWIS LOANS THROUGH  
CASCADE TRAINING \*

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- Economic analysis of investment to be made through credit to estimate conservatively the costs and returns that can be expected.
- Getting Village Committee to establish their own criteria with which to judge loan requests (Annex I).
- Getting GVs to decide what action they would take vis-a-vis borrowers delinquent in loan repayment.
- Business management principles:
  - . Buying and selling in large quantities
  - . Providing the market with what is wanted, where and when it is wanted and in the form and in the amounts they want it.
  - . Price elasticity of demand.
  - . Avoiding saturated markets.
- Establishing a credit rating by successfully completing projects by the GVs' own means and meeting other criteria of a strong GV.
- Why loan down payments are expected, and uses GVs can make of loan down payment money.
- Simplified systems of accounting:
  - . List of management questions that can be answered from accounts (Annex S) and show how these accounts can be used to make management decisions.
  - . Difference between accounts for a point in time and for a period of time.
  - . Transforming annual interest rate to daily rate (Annex R.)
  - . Calculating the cost of inactive money.
  - . Introduce each form and do exercises (Annexes R,T,U,V,W,X,Y,S, AA and BB).
  - . Introduce feasibility study and do exercises (Annex K).
  - . How to teach literacy in numbers, adding, subtracting, multiplication.

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\*) Cascade training should be taught from a technical manual which persons taking the course can take with them to use in their work with TWIS projects and in giving apprentice training to village accountants.

62

Annex DD.

BUILDING CAPITAL ABSORPTION CAPACITY

- Giving many loans quickly and soundly.
- Sorting out high return investment possibilities.
- Building an institutional structure that gets high loan repayment rates.
- Support of loans so that borrowers credit rating improves and they advance to larger projects.
- Motivation, training, and support of agents.
- Strengthening business management ability of borrowers.
- Training village committees to evaluate loan applications soundly and efficiently.
- Thinking big and looking far ahead.
- Scheduling, timing and planning.
- Accurate, rapid, and regular accounting and statistical reporting.

Annex EE.

CRITERIA FOR EVALUATION OF INDIVIDUAL TWIS PROJECTS

- Increased agricultural production of borrower.
  - Increased level of nutrition of borrower.
  - Increased net income of borrower.
  - Positive social-economic impact on village.
  - Village Committees strengthened.
  - Employment of technology that is appropriate to available production resources.
  - Business management/accounting ability of borrower improved.
  - Non-discrimination against women, minority groups and low income people.
  - Acceptance by village committees of responsibilities for project management and repayment of loan.
  - Profit from project enough to repay loan plus capital reserve for future projects.
  - Decreasing dependence on TWIS extension agents to manage project.
  - Does the project compliment other projects.
- 64

**Annex FF.**

**CRITERIA FOR EVALUATION OF IMPACT OF TWIS ON DEVELOPMENT OF THE SAHEL**

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- Number of borrowers.
- Number of villagers receiving direct or indirect benefits from the project.
- Increased agricultural production.
- Increased level of nutrition.
- Increased income of borrowers.
- Village structures strengthened.
- Multiplier effects.
- Viability of project.
- High loan repayment ratio.
- Quick loan approval.
- Decentralized administration.



# TRAINING OF WOMEN IN SAHEL PROJECT.

## PROJECT INTERVENTION AREAS

