

CONSULTANCY REPORT ON
COMPUTER DEVELOPMENT FOLLOW-UP
FOR THE
UGANDA RURAL ECONOMIC RECOVERY PROJECT
Cooperative Agreement
No. 617-0108-A-00-7001-00

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INTRODUCTION/SCOPE OF WORK

The consultant arrived in Kampala, Uganda on July 8, 1988 to perform a follow-up consultancy of approximately six weeks. The initial consultancy took place in October-November, 1987. The scope of work assigned was as follows:

1. Install relevant software on ICI (Intermediate Credit Institution) and project computers.

2. Review adequacy of previous installations and make necessary changes in inventory control and credit accounting procedures.

3. Organize and conduct training in four areas of operation:

a) Train UCB and RERP credit staff on input and analysis of credit information using Reflex and Lotus 1-2-3.

b) Using WordPerfect, teach word processing to project administrative staff.

c) Train procurement, distribution and warehouse staff on commodity tracking, inventory control and purchasing. Possibly include Uganda Co-operative Alliance and Uganda Co-operative Central Union staff in training.

d) If possible, do cross training among project staff to insure continuity in the event of sickness, resignation or long-leave.

4. Analyze existing software applications and recommend any necessary changes or updates.

5. Other duties as may be assigned by Dennis Frederickson, Team Leader/Credit Advisor, which are consistent with the overall scope of this assignment.

The only significant change made to the Terms of Reference during the consultancy was installation of two computer systems for the Uganda Commercial Bank, currently the only ICI for the RERP. The computers did not arrive in Uganda before the consultant left on August 19, 1988.

BACKGROUND

The goal of the Uganda Rural Economic Recovery (RER) Project is to provide residents of war-damaged areas of Uganda with the opportunity to reestablish their enterprises and resume economic growth and development. The potential of a country with such an enormous wealth of natural and human resources has been severely constrained over the past 10-15 years by social and political disturbances and uncertainty. Assuming that political stability can be maintained, providing opportunities is deemed the most important type of assistance and therefore the basis of the RER Project. Recent improvements have been noted in the progress of the rural Ugandan since the ending of major hostilities. The RER Project will continue to strive to attain continued improvement and development.

The purpose of the RER Project is to support the rehabilitation of rural income generating activities by making necessary commodities and credit available to residents of war-damaged areas. Eligible commodities for the project include directly productive goods, construction materials used in the building or rehabilitation of farm buildings, worksheds, etc., and small-sized tractors.

Many shops that were once in operation throughout the target area of the RER Project, (including the districts of Luwero, Mpigi and Mubende), are now closed with only exceptions in large trading centers. Shops that are open supply only a very small stock of inputs. Domestic production of agricultural inputs and other productive goods has been very low for many years. Imports have likewise been low due to the inability of firms to gain access to foreign exchange. Cash or credit are not readily available to small commercial farmers. Mechanized farm equipment, i.e. small tractors, have not been available to Ugandan farmers for many years. Besides providing for avenues of solution to some of the problems noted above, the RER Project includes the important element of institution-strengthening.

The RER Project has four major components:

1. Importation of commodities for use by small commercial farmers and other rural entrepreneurs.
2. Provision of credit to farmers and entrepreneurs to purchase necessary inputs.
3. Provision of technical assistance for the management and monitoring of commodity procurement and distribution, and the credit scheme.

The life of the project will be four years. The first staff arrived in Kampala in late April, 1987. According to the cooperative agreement, project completion is scheduled for September 30, 1990. Shortly after the arrival of Dennis Frederickson, Team Leader/Credit Advisor, and Marshall Ferrin, Commodities Procurement & Distribution Advisor, staff was hired to implement the project.

During the life of the project it is expected to generate about 8,000 small commercial farm and rural enterprise loans. It will also provide for about \$2.3 million worth of commodities for farms and rural enterprises, in addition to the \$1.4 million of small-sized tractors, ancillary equipment and spare parts.

The project is expected to:

1. Reestablish the productive capability of small-scale commercial farmers, increasing their opportunity for income generation.
2. Rehabilitate non-farm productive enterprises, resulting in a growth of income earning opportunities.
3. Rehabilitate wholesale distribution and retail sales commercial trading channels, and expand the input delivery system.
4. Improve the institutional capacity of the participating Intermediate Credit Institution (ICI) for the administration of small-scale rural credit, and lay the foundation for the development of future credit.

PROCEDURE

1. Evaluate existing computer hardware and take the necessary steps to eliminate all hardware problems.
2. Review adequacy of previous hardware/software installations and make necessary modifications.
3. Determine applicability of the inventory control system and make necessary modifications.
4. Determine applicability of the commodity tracking system and make necessary modifications.
5. Train appropriate RERP staff (procurement, distribution and warehouse) in the use of inventory control and commodity tracking systems and input and maintenance of the computerized system. Communicate with Uganda Cooperative Alliance and Uganda Central Cooperative Union and train selected staff if appropriate.
6. Evaluate adequacy of the credit information (farmer loan accounting) system and make necessary modifications.
7. Train appropriate RERP and UCB staff in the use of the credit information system.
8. Train RERP administrative staff in using WordPerfect word processing software and familiarize appropriate staff with Typing Tutor IV educational software.
9. Evaluate additional RERP staff training needs and develop a training plan.
10. Develop general computer procedures, i.e. backups, DOS utilities, file management, and train appropriate staff.
11. Evaluate hardware/software delivered to UCB as to its applicability to the tasks identified.
12. Set up UCB hardware and install relevant software.
13. Evaluate UCB computer capabilities and, if possible, train UCB staff on applicable software installed on UCB computers.

FINDINGS

Major findings noted during the follow-up consultancy are noted below:

1. The Uganda Commercial Bank (UCB) is currently the only intermediate credit institution handling RERP funds. The UCB has some computer capabilities, both in terms of hardware and staff knowledge, although the department responsible for maintenance of the credit information may have little computer experience. The RERP is providing two IBM Personal System 2 computer systems and appropriate software to the UCB as soon as they are delivered in Uganda. The computer systems will differ from the RERP computer hardware. It is expected that the UCB will receive computers with one 3.5 inch internal drive and an external 5.25 inch drive, to facilitate transfer of information with the RERP computers which have only 5.25 inch internal drives. It is also expected that each computer will have a fixed disk of at least 20MB and memory of at least 1MB. It is unknown at this time what operating software will be sent with the computers. Adequate applications software exists in Uganda to support the RERP credit information maintenance and related analysis.

Credit information requirements of the RERP remain to be limited to the primary society level. The credit information is to be reported from the UCB branch offices to the RERP on a monthly basis. The UCB is undertaking a Rural Farmer Scheme (RFS) in which they intend to make a "substantial" number of loans to individual farmers. Accounting information for RFS loans may require additional software and/or hardware in order to maintain the number of loans anticipated.

2. The type and amount of computer hardware purchased for the RERP Project is now adequate to perform the required information maintenance and analysis. As suggested in the initial consultant's report, an additional low-priced, IBM compatible computer system (Epson Equity I+) was purchased to free an existing system to be available to the entire staff for training and daily use.

Computer software purchased for the RERP remains adequate to perform the necessary data collection and analysis required and projected. As expected, WordPerfect word processing software is the most utilized software, with the Lotus 1-2-3 spreadsheet also getting substantial use. Utilization of the Reflex database software will increase due to commodity tracking/inventory control/accounts receivable and credit information systems that have been designed.

3. Staff computer training has been limited to on the job training since the consultant's departure in November, 1987.

A key employee trained in the use of Reflex software and the development and maintenance of the commodity tracking and credit information systems left the RERP, greatly affecting the continued development and finalization of the two systems which were designed in skeletal structure at the time. Local outside training sources were not used for staff computer training, probably because of their expected performance, based on the previous experience of others using the firm. At this point in the project it is felt that additional outside training on a large scale is not required to complete the necessary computer development. The training provided by the consultant, along with self-taught tutorials available with the applications software, and written instructions included as a part of this report should be sufficient for the staff to fulfill the project's computer requirements.

4. The data fields initially identified by the consultant were still applicable with few exceptions. Few major changes were made to the input form design; codes were expanded extensively due to the identification of commodities and primary societies participating. The size of the database for the credit information system will be small due to information being maintained only at the primary society level. The size of the database for the commodity tracking/inventory control/accounts receivable system will be much larger due to the number of transactions that have and will occur during the ordering, allocation, delivery, collection and payment for the extensive list of commodities and distribution points (primary societies) involved.

5. A formal internal system of passing information from the procurement/warehousing and credit staff does not currently exist. Information must be made available to staff responsible for the database maintenance to insure that all the required information is input into the database. Otherwise, the reports generated from the database will be inaccurate and meaningless.

6. Internal accounting for the office continues to be done effectively and efficiently by the project accountant without the use of a computer. Computerization of accounts receivable from primary societies for the purchase of commodities, report generation of credit information will provide an audit of the manual records currently being maintained.

ACCOMPLISHMENTS/RECOMMENDATIONS

Accomplishments of the follow-up consultancy are directly related to the procedure the consultant followed. Accomplishments and related recommendations are summarized below:

1. The commodity tracking system which was developed in a skeletal format during the initial consultancy was enhanced to not only track commodities but also provide complete inventory control and accounts receivable from the distribution points, i.e. primary societies.

It was not possible to update the entire database for the commodity tracking/inventory control/accounts receivable system before the departure of the consultant, but the information necessary for input into the database was collected and a substantial amount of data necessary for data input was completed. The RERP staff responsible for updating the databases and developing related reports are now quite well prepared to continue on with updating and maintaining the database, and designing and producing the related reports.

Recommendation: The commodity tracking system should be implemented as soon as possible. This will require that the database be brought up to date and maintained properly. Report generation should be based on the need of management.

Recommendation: A formal system for funneling commodity tracking and credit information be implemented immediately. The content of reports generated by the two database systems are only as good as the data that is input into the database. It is imperative that those responsible for data input and report generation be informed accurately and timely in order to maintain a reliable base of information.

2. The credit information system, formerly called the farmer loan accounting system in the consultant's initial report, was finalized in format, the database was brought up to date, and the staff was trained in form design/modification, data input, cross-tabbing, sorting, searching and filtering, listing, reporting and graphing. After training, examples of customized reports were prepared by the staff with the consultant's assistance.

Recommendation: After the two UCB computers arrive and are installed the RERP staff responsible for the maintenance of credit information and related report generation should schedule training sessions for the UCB staff who will be responsible for using the two computers and maintaining the credit information. The training should include general use of Reflex software and well as specialized training in the use of the credit information system. Training for the ICI,

currently the UCB, will better enable them to handle statistical reporting for the cooperative component of the RFS.

3. Both the commodity tracking/inventory control/accounts receivable and credit information systems were documented with user instructions. See Appendices B, C, D and E. As employees are trained, they will wish to refer to the user instructions and forms that are in the appendices, using them as a guide to maintaining their databases and performing the necessary analyses and reporting.

Recommendation: The administrative assistant should assume primary responsibility for the maintenance of the database and the production of reports. The clerk/typist, also trained during this consultancy, should continue to be well cross-trained in whatever areas the administrative assistant has developed expertise which relates to the project.

4. Computer hardware and software was evaluated and necessary modifications made to insure that appropriate files were installed and configurations done correctly. An additional computer system had been installed since the consultant left in November, 1987, and an inadvertent formatting of the hard disk occurred on another system, necessitating the reconfiguration and reinstallation of some software.

5. Computer training was provided to appropriate RERP staff in the disk operating system (DOS), WordPerfect specialized functions, utilities, file management, Lotus 1-2-3 specialized functions, Reflex (i.e. database systems developed), menu modifications, and printer use. Management was briefed on the capabilities of the software developed. Typing Tutor IV software was installed and made available to project staff who are new to computers.

Staff was trained in proper backup procedures and the importance of backups was stressed. Backup procedures for the computer user were developed and provided as Appendix A of this report.

Recommendation: Backups should be done religiously. Whenever the database is updated or new files created, i.e. reports, an extra copy should be made on a floppy disk to back up the hard disk. Both RERP computer systems should have the same data files with the administrative assistant's computer designated as the primary one. Procedures in Appendix A should be adhered to avoid loss of data.

BACKUP PROCEDURES

After the initial backup of the entire system, backups should be performed whenever it is determined that additional files written to the hard disk would cause the operator to use more time in recreating the lost files than in performing the backup. The importance of your data will always affect your backup policies and procedures.

It is normally suggested that a backup of the complete hard disk be performed, as well as backups of individual files that may be of particular concern. Since the RERP has two computers configured almost identically, with the only difference being that of individual files created within Reflex, Lotus 1-2-3 and WordPerfect, and any other files created through application software, the need to back up the entire hard disk is minimized since it has effectively been accomplished by the duplication of systems. Furthermore, the RERP does not currently have an abundance of floppy disks to perform the backup with. Backup of 15MB, the current use of the systems, requires approximately 43 disks. Be aware that destruction of both computer systems, such as in a fire, would destroy both hard disks, making all information unretrievable. Backups on floppy disks should be kept at a separate physical location; Mbuya Flats is suggested.

It is however very important that the individual files, i.e. credit information, created by the computer operators be backed up regularly, so as not to lose files which may be important to the project.

There are two separate methods of backing up files. The first method is that of copying files from the hard disk to floppy disk, one you are familiar with and will be the easiest but not the fastest and most efficient to accomplish. The second method is that of performing an actual backup/restore in which you can specify what directories and files you wish to be backed up from the hard disk to floppy disks. The formal backup method squeezes files onto floppy disks in a much more efficient manner than copying them, but also requires that you restore the file before using it again. Of course, if there is no loss of data from the hard disk, you may never have to restore a file from being backed up. Backups are only performed in case of loss; they are never used if there is no loss of data.

Because of the nature of RERP creation and use of application software, the following method of backups and file

maintenance is suggested:

Copy the following files from the hard disk to floppy disks each time an update occurs:

Reflex directory

All files ending in these extensions:

1. Database files: .RXD
2. Crosstab specification files: .RXC
3. Graph Picture (Pic) files: .RXP
4. Report specification files: .RXR
5. Print to disk files: .PRN

This can be accomplished by the following command from DOS, with a formatted floppy disk in drive b:

```
C:\>copy c:\reflex\*.<extension listed above> b:, e.g.  
C:\>copy c:\reflex\*.rxd b:
```

This copies all files ending with that extension from the hard disk in the reflex directory to the floppy disk in drive b:. All updated database files end in the extension .RXD and this will be the most common backup (copy) you will perform, as that database will be updated often.

NOTE: This is also the method of transfer you will use in providing credit information files to UCB, so they can copy the files to their hard disk.

Lotus 1-2-3

All files ending in these extensions:

1. Worksheet files: .WK1

This can be accomplished by the following command from DOS, with a formatted floppy disk in drive b:

```
C:\>copy c:\lotus\*.wk1 b:
```

This will copy all worksheet files from the lotus directory on the hard disk to the floppy disk in drive b:.

Another way to accomplish the same is to save the file again on a floppy disk, under the same name, using the File/Save command within Lotus. This is done by designating drive b: when the File/Save command is used.

Similarly, other files from other application software which resides in other directories may be copied to floppy disks. Currently almost all files for the RERP are created in either WordPerfect, Lotus 1-2-3 or Reflex, and are therefore in the wp, reflex, and lotus directories.

The following method is suggested for backing up your

WordPerfect files:

The WP directory should be scanned at least once per week and all files which are definitely not to be used again be deleted from the disk permanently. Many files are created, e.g. letters, memos, etc. that have hard copies already printed. The number of word processing files in the directory will otherwise become too large to manage, with filenames becoming hard to recognize.

The WordPerfect directory does not automatically append an extension to word processing files, as is done in Lotus 1-2-3 (i.e. .WK1), and Reflex (i.e. .RXD, .RXR, etc.), therefore making it impossible to copy the word processing documents to a floppy disk in one command. This is where the file naming convention which was created by the administrative assistant becomes important. For example, if one were to want a copy of all memos on a floppy disk, naming the memos with an extension of .MEM would make it possible to copy the memos to a floppy disk in one command, i.e. C:\>copy c:\wp*.mem b: . As you can see it is important to be careful in naming files so as to keep copying for backups in mind.

Another way to accomplish the same is by copying the file to drive b: in WordPerfect using the F5 command; thus saving the file twice just after it is created, once on the hard disk and once on the floppy disk.

Another option to backing up the WP directory is to use the backup command, which requires that the files be restored if they are to be used. The advantage of using backup rather than copy is that you can store more files on a disk because of the compressed format in which the files are stored. The DOS manual in the RERP office has specific instructions on a variety of backup commands, but here are some brief instructions of what you might use in backing up the WordPerfect word processing files. The commands you will use most often include the following:

Initial backup of all files in the wp directory:

```
C:\>backup c:\wp\*.* b:
```

After the initial backup of all files in the wp directory it is suggested that a weekly backup of files which were added or modified be performed. Adding /a at the end of the command will direct the computer to find those files added since the last backup, and adding /m will direct it to find those files that have been modified since the last backup, and back them up on the diskette. Failing to use the /a at the end of the command will cause the files already backed up on the diskette to be deleted from the diskette. Therefore, if any files are already backed up on the diskette be sure to use the /a at the end of the command. The command will therefore

look like this to do a backup of files added and modified since the last backup:

```
C:/>backup c:\wp\*.* b:/a/m
```

To restore files that are backed up so they are once again usable on the hard disk use the restore command like this:

```
C:\>restore b:*.* c:\wp
```

The computer will prompt you to insert diskettes into drive b: as you perform the restoration.

NOTE: Fastback applications software, available on all of the project computers, automates the same backup/restore as done through DOS. If you feel comfortable using Fastback, which we have used in training, do so as it will accomplish the same final product as doing a backup and restore through DOS.

RERP CREDIT INFORMATION AND COMMODITY TRACKING SYSTEM
FILENAMES

Credit Information Filenames and Descriptions

CR.RXD

Database file with fields defined on form only- no data

CR1.RXD

Database file updated through 15 Aug 1988. This file should be named CR1DDMM after each modifications.

CR1REGNO.RXD

Database sorted by registration number.

CR1APPRO.RXD

Database file searched and filtered for approvals, sorted by registration number.

CR1WITHD.RXD

Database file searched and filtered for withdrawals from UCB Branch X1 in the Luwero district, sorted by registration number.

CR1APPDI.RXC

Crosstab of average approvals by district for each crop type.

CR1WITHD.RXP

Graph (Pie Chart) depicting withdrawal percentage of total withdrawals by district.

CR1WITRE.RXP

Graph (Bar Chart) of withdrawals searched and filtered for only those primary societies with withdrawals.

CR1SUM.RXR

Report of credit information showing approvals, commitment charges, handling charges, interest charges, withdrawals, repayments and automatic calculated balances of each district and grand totals.

Commodity Tracking Filename and Description

CT.RXD

Database file with fields defined on form only- no data.

Note that filenames may differ only in extension. This is totally acceptable and sometimes preferred to identify the same information shown in different format.

GENERAL REFLEX DEVELOPMENT INSTRUCTIONS

The credit information and commodity tracking/inventory control/accounts receivable systems utilize the Reflex database software, which provides the capability for many business analysis functions.

By entering information on a predesigned form input screen named ct, which refers to commodity tracking, or cr1, which refers to credit information, you will be creating records which will build a continually growing database of information relating to the purchasing, pricing, stockpiling, delivery and distribution of commodities involved in the RERP.

Following are brief instructions on accessing the data input screen as well as analyzing the data through such means as sorting, searching based on specific criteria, crosstabbing, printing and reporting through a predesigned form. Although the instructions are designed for the beginner, they are brief in nature and there is no better source of complete information than the two manuals available to the RER Project staff. The program manual published by Borland, titled Reflex: The Database Manager is written from a technical viewpoint and is quite complete. It also provides a beginning and advanced tutorial to help the beginner learn the capabilities of Reflex. Using Reflex published by Que is written from the user's viewpoint and may be more helpful to the staff in learning the Reflex software and answering their initial questions. The manuals should be referred to whenever instructions provided here are not complete enough to accomplish the step you wish to perform. Step-by-step instructions are provided in both manuals. It is suggested that you start with the Using Reflex manual to answer your questions.

Specific instructions on Reflex are also available by pressing F1 (the Help key) and following the on-screen menu to access information regarding the subject you are confused about.

The Form Input Screen:

1. Turn on the computer and wait for the main menu screen to appear.
2. Select the number corresponding to the Reflex software and press enter.

3. After the initial Reflex screen appears press the / key. A "pull-down" menu will appear which will list several options from which you can choose.

4. You will notice that there are several main headings at the top of the screen which are headings of menus. The "Print/File" heading is the one you are now concerned with; it can be accessed by pressing the right arrow key twice.

5. Within this menu you will be selecting "Retrieve File" which is the first option below the "Print/File" heading. "Retrieve File" is selected by pressing the down arrow key until Retrieve File is highlighted and then pressing enter.

6. The next screen that appears will ask you for the filename that you wish to retrieve. You may type either the filename or press F10, which will list all of the files that are stored on drive c within the Reflex directory. If you choose to use the F10 option of accessing the file and there are a number of files saved in the Reflex directory, you may have to use the down arrow key to locate the file you wish to retrieve.

7. Once you have selected the file by pressing enter after the filename is highlighted, and then proceed, the form screen will appear. When the form screen appears, at the top of the screen you will see "Rural Economic Recovery Project".

8. On the right hand side of the screen you will notice all the field names, or locations where data can be entered. This is the case for both the credit information system (filename crl.rxd; see Appendix E) and the commodity tracking system (filename ct.rxd; see Appendix D).

Data may also be input into the database by using the List View rather than Form View. List View is often preferred by the data entry operator because it is easier to identify what data has been input thus far, and in helping to identify which fields should be used to enter data for different types of transactions. The List View for the current credit information database is shown as Appendix F.

9. On the left side of the screen you will see codes relating to the action you are recording, the primary society, district union or wholesaler, the district involved and the commodity for the commodity tracking system, and slightly different information for the credit information system. These are the appropriate codes which will be used for data entry on the right side of the screen. The entire left side of the screen is only for your information, to help you in inputting the correct codes on the right side of the screen. The only information that builds the database and the subsequent analysis is that information that is input on the right

side of the screen, beside the field names.

The Form Design Screen:

10. While updating the commodity tracking database as additional commodities are added to the list of those dealt with by the RER Project, you will likely wish to add those to the input form for your convenience in locating the appropriate codes for data entry. Likewise, additional wholesalers, primary societies, and district unions may be added to the list. The form you see on the screen is actually much larger than the screen itself, more than large enough to accommodate all the information (codes) which you wish to maintain. Editing of the data input form is done by pressing the / key to access a pull-down menu, pressing the right arrow key until you reach the "Form" heading, pressing the down arrow key until you reach the "Design" option, and pressing enter to access the form design mode.

11. You will notice that the form, in design mode, appears slightly different than the input form. This is because the design mode allows you to change the design of the form and see what items are input through a word processing method (those with ' preceding them), and those that are input as fields (without '), which allows for data to be input after them when in the data input mode.

Editing the form is simple. For example, if you wish to add another primary society to the list in the middle of the form, move the cursor with the arrow keys to just below the ' preceding the last primary society name and type another '. Note that currently the primary societies are listed in alphabetical order for the data entry operator's convenience.

To add additional societies it is suggested that they be added to the bottom of the form in order to avoid moving each and every line to put the primary societies in alphabetical order. Follow the ' by typing the name of the primary society you wish to add, and then press the space bar until the cursor is just below the first letter of the code of the primary society above. Type the appropriate code of the primary society you just added, following the sequence that has been established. To edit codes you may either type over them using the method above or move the cursor to highlight them and then press F2 to access the edit mode for the area you have highlighted. **WARNING!!!**-Never change the code of a primary society, wholesaler, action, district, or commodity after you have used that code for data entry. If you do, information that has previously been input and added to the database of information relating to say, a particular primary society, would not be associated to the same primary society if a different code were used for additional transactions.

In order to move information already input on the form simply press /, press the right arrow key to the "Form" heading, press the down arrow key to "Move," and press enter. You will then be able to move the information by pressing the appropriate arrow keys and pressing enter when the desired location is indicated on the screen. Field names as well as informational items may be moved through the Form Design screen.

Field names, such as the ones on the right side of the screen, can be added by following the same procedure as adding information was done above, with the exception of the ' preceding the name. The ' is what tells the Reflex software to distinguish between field names and just information added to the data input screen for the user's information and convenience. To exit the form design screen press /, use the arrow keys to get to the "Form" heading, and get to "Exit" and press return.

12. The Field and Sort settings tool under the Records menu should be used to identify properties of each field, such as the type of field, whether a formula is involved in calculating the field, whether the field is to be sorted, if it is ascending or descending, the format and the precision (decimal places to be displayed). These settings should be determined and set for each field. Go through them carefully.

13. To record information (add to the database) whenever activity occurs, such as the ordering of bicycles, first access the heading "Records" by using the / and the arrow keys. Use the down arrow key to highlight "Add Record," and press enter. You will now be able to enter additional transactions which will be added to the database of information already input. Simply insert the information in the area indicated by inputting the appropriate codes and following the instructions noted to the left of the field. Again you may use either the Form View or List View to input data into the database. If you make a mistake type over it or return to the field and input the information again.

14. Once field values are entered they can be displayed by the Form/View or List/View commands. The F7 and F8 keys will allow you to move from one record to another; F7 for the previous record and F8 for the next record.

15. When using the List/View command if the width of some of the columns are not wide enough to read the data in the column, noted by ***** on the screen, you can widen the column by using the Edit/Set Column Width command.

16. Remember to use the Print/File Save command to insure that you have saved all of the data that you have added to

the database through entering records. If you do not save the file you will lose all the data you have added whenever you exit the Reflex software.

Record Sorting:

17. Records may be sorted by using the Records/Field & Sort Settings command, the same command used to identify properties of the fields (see no. 12 above). This will give you the capability to sort the records by whatever criteria you desire. For example, if you wish to see the transactions that took place for each commodity, separated by commodity type, you can use this command to specify the software to list the commodities alphabetically, so they are displayed in groups rather than in the order that they were recorded. The Records/Perform Sort command is used to view the list after the sort parameters have been set. Sorting can be done in levels, sorting first by a primary field, then by a secondary field, etc. An example of sorting of the credit information is shown in Appendix G which displays all credit transactions sorted by registration number in ascending order.

Record Searching:

18. The search capability of Reflex is one of the most useful tools for the RER Project. Records may be searched based on complex criteria and listed to provide management information. It is likely that there will be occasions when there will be a need for listing data meeting certain criteria. For example, management may wish to know how many hoes were delivered to primary societies in the Mubende district in the months of January through March and in quantities of 200 or more at a price of 1,200 per unit or less. This is possible by identifying the specific criteria through writing formulas into the Search/Set Conditions command. Specific instructions on how to enter the formulas can be found in either of the Reflex manuals; the procedure is fairly simple in nature. It is suggested that you start with the area titled "How To Write Search Conditions" located on p. 155 in the Using Reflex manual. Examples of searching are shown in Appendices I and J. Appendix I is a list of only credit approvals, then sorted by registration number. Appendix J is a list of withdrawals from UCB branch X1, in the Luwero district, sorted by registration number.

19. After entering the search criteria it is necessary to apply a filter which filters out the records meeting the specific criteria you have identified. This is done through the Search/Apply Filter command. Remember to apply the filter.

Graphics:

20. Graphing is another capability of Reflex. It is accessed

by using the Views/Graph command. There may be occasions when management wishes to present some information in graphic form for some reports. Chapter 9 (p. 235) of the Using Reflex manual covers graphics with the Reflex system. It is not particularly difficult to create graphics. It should be noted that the IBM Proprinter purchased by the RERP is not well suited to do quality graphics. It is a 9-pin printer which does not provide the density of a 24-pin printer and will therefore produce somewhat inferior graphics. The Epson LQ1050 printer added to the project will produce good graphics and should be used for management reports rather than the IBM Proprinter. Some graphics were done during the training sessions and users are now capable with the use of graphics and the options available with graphics. It should be noted that graphics is created in Reflex but printed through Reflex Report.

Examples of graphing for the credit information are included as Appendices K and L. Appendix K is a bar chart depicting all withdrawals filtered for only those primary societies with withdrawals. The x and y axes were defined and then a title was added. Remember to group the records by using For Each and to identify that you want the records summed. Appendix L is a pie chart depicting the withdrawal percentage of total withdrawals by district. The type of graph must also be identified. Try several types and pick the one that depicts what you wish to convey in the best manner.

Crosstabbing:

21. Crosstabbing is a feature that RER will utilize. It is accessed by the Views/Xtab command. Crosstabbing will allow the user to, for example, sum all of bicycle orders by a particular society in each of the districts. It could also be used to calculate the percentage of all or individual commodity type orders by primary societies, or by district. Crosstabbing is covered in Chapter 10 (p. 273) of the Using Reflex manual. You can create summaries of the information, such as sums, averages, etc. by using the Crosstab main menu. Use For Each within the Crosstab menu to create one row or column heading for each unique entry in the field. An example of crosstabbing is found in Appendix J which displays a crosstab of approvals by district for each crop type.

Reporting:

22. Reports will be a useful function for RER; it is the final product of the database compilation and what management will see. Report designs can be saved for later use, similar to Crosstab formats. Chapter 12, beginning on p. 341 of the Using Reflex manual covers reporting in detail. Reporting was covered in detail in the training and some reports have been left with the RERP staff, as well as examples of

Crosstabs, Searches, Sorts, etc.

The credit information report is named crlsum.rxr and the report updated through all credit transactions taking place through the end of July is found in Appendix M. The form's development was covered in your training. Whenever developing a form remember to follow the following procedure:

1. Enter Report Reflex/Report.
2. Retrieve the database using the F10 Choices key.
3. Sort the database using the Field and Sort Settings tool.
4. Identify the elements of the report in the Report Design Mode.
5. Tell Reflex when you want the report elements printed by using the Row Flags for each line. This is done by pressing the F3 function key to mark the row, then the F10 key for Choices and selecting the appropriate flag for printing.
6. Preview the report as you design it to help you in seeing how it will look when it is printed.
7. Print the report.

As part of the development of the RER commodity tracking system and inventory control, a report has been predesigned and saved under the name of qrpt1. The report is designed to report information regarding the number of units ordered (cumulative) for each commodity by each of the three districts during the quarter.

The first step in designing a report is to select Reflex Report from the main menu. Press enter when the Report box is highlighted. The Report menu is very similar in operation to the Reflex menu. As always, press the / key to access the pull-down menus and then use the arrow keys to move from menu to menu, and within the menu. The predesigned report for quarterly reporting of commodities orders is accessed by using the Print/File/Retrieve command and then pressing F10 for a choice of files; qrpt1 is the file name.

Design of the Report Reflex report is done in the same way as design of the form in Reflex. Attributes are available to the user to accumulate subtotals, totals and perform many other arithmetic calculations. Titles may be added to print only at the top of the first report page, or at the top of every report page. Printing can be done in compressed or normal mode through the Print/File menu using the Print command. Use \015 as the setup string in the Print Settings tool to designate compressed print. The 8.5X11 paper will accept a maximum right hand margin of 132. Page number, date, and time can be automatically entered when the report is printed by using the F10 Choices key as you are designating a field.

Special Instructions for the Credit Information System

The credit information system is designed to provide the information required by the credit staff and management. Information maintained is limited to the primary society level. It is anticipated that the individual farmer loan data will be kept at the primary society and the UCB branch office will be reporting summarized information to RERP monthly.

This monthly information will be input into the Reflex created credit information system and will build a database of information on approximately 60-100 loans per society in 6-8 districts. As the database is built, all information regarding the loans is recorded in the appropriate fields and can later be sorted, searched and reported in the desired fashion by using the capabilities of the Reflex software. Instructions on using the Reflex software can be found in Appendix C.

Balances, interest and other charges, withdrawals and repayments should be reconciled with the UCB monthly.

Special Instructions for the Commodity Tracking System

When building the commodity tracking system the following manual records should be used to provide data for the database:

1. RER Project Commodities Order List
-Lists all commodities ordered with dates, quantities and amounts. Provided by the commodity distr. advisor.
2. Notices of commodities delivered to the warehouse
-Provided by warehouse staff.
3. Allocation list of commodities allocated to distr. pts.
-Provided by warehouse staff.
4. Distribution Vouchers.
-Identifies commodities collected by distr. pts. or delivered to them. Provided by warehouse staff.
5. Cash Receipts
-Identifies payments made by distr. pts. to RERP. Provided by the project accountant.

Accounts receivable should be reconciled between the computer and the RERP accounting records monthly.

A physical inventory of the project should occur periodically in order to reconcile the commodity tracking system information.

RURAL ECONOMIC RECOVERY PROJECT
 COMMODITY TRACKING/INVENTORY CONTROL/ACCOUNTS RECEIVABLE INPUT SCREEN

Appendix B

Action Code

RER Order	RD	Wholesaler Code		
Deliv to RER Warehouse	RD	Premier Bldg Soc	W1	(e.g. mm/dd/yy) Date:
Alloc to Whol. DU, PS	AL	Techno Fire	W2	
Collect by Wh. DU, PS	WD	District Union Code		
Paym't made by Dist Pt	PD	East Mengo	D1	Receipt No.:
		Primary Society Code		

District Code

		Abafuba Kalagala	P1	
Luwero	LU	Akateyanira	P2	Action:
Mpigi	MP	Apollo Kaggwa	P3	
Mubende	MU	Baganda Wawu	P4	
		Baanunika	P5	Commodity:

Commodity Code

		Basima	P6	
Axes	AX	Batono	P7	
Bicycles with spares	BC	Bbuto Kichwa	P8	(Whol. DU, PS) Dist'b Pt.:
Bicycles w/out spares	BO	Bujubi	P9	
Saw Saws	BS	Bukatira	P10	
Brick Machines	BM	Bukimu	P11	District:
Brick & Tile Machines	BT	Bukweb.	P12	
Cement	CM	Busunju	P13	
Fishing Rquipment	FB	Degeya	P14	UPrice:
Gunny Bags	GB	Kanzira	P15	
Hoes	HO	Kasagga	P16	
Iron Sheets	IS	Kasaala Growers	P17	Total:
Machetes	MC	Kassanda	P18	
Pruning Saws	PS	Kaswa-Budoma	P19	
Ridges	RG	Katikanyonyi	P20	(all are per Quantity:
Roofing Nails	RN	Kaweri Vamutulo	P21	unit except
Shovels	SH	Kazwama	P22	nails are per
Slashers	SL	Kiboga	P23	kilo and cement
Tata Lorries	TL	Kibose	P24	is per bag) -
Wheel Barrows-Heavy	WH	Kigali Kiribadde	P25	
Wheel Barrows-Light	WL	Kijjungute	P26	
Wire Nails 3"	NA	Kirangira	P27	
Wire Nails 4"	NB	Kisajizi	P28	
Wire Nails 5"	NC	Kiwenda	P29	
Wire Nails 6"	ND	Kungu	P30	
Bicycle Spares		Luwero Kezimbira	P31	
Hub Axles	S1	Lwampanga Fishing	P32	
Chains	S2	Mbukiro	P33	
B.B. Cups	S3	Mubende Tw Multi	P34	
Tyres	S4	Muyobczi	P35	
Tubes	S5	Nakasongola Grow	P36	
Rims	S6	Nakasongola Trans	P37	
Pedals-pairs	S7	Nakitoma	P38	
Chain Wheels	S8	Namukanga	P39	
Front Forks	S9	Semuto	P40	
Rear Hubs	S10	Wabusana	P41	
Sprokets & Nipples	S11	Wobulenzi	P42	
Axles-dozens	S12			
Steel Balls	S13			

RURAL ECONOMIC RECOVERY PROJECT
CREDIT INFORMATION INPUT SCREEN

Appendix E

District Code		PS/OU Registration No.	(mm/dd/yy)	Appr Date:
Luwero	LU	Abafuba Kalagala	387	Due Date:
Mpigi	MP	Akateyanira	3191	Tran Date:
Mubende	MU	Apollo Kagga	452	
		Baganda Wawu	342	Intake No.:
		Bamunanika	161	
		Basilua	1639	Registr No.:
		Bateno	1014	
		bbuto Kichwa	435	District:
		Bujubi	1881	
UCB Branch Code		Bukatira	41	UCB Branch:
Luwero	X1	Bukindu	160	
Mpigi	X2	Bukweba	2774	Crop:
Mubende-Mityina	X3	Busunju	886	
Mubende-Kiboga	X4	Degeya	2471	Appr A'mt:
Mubende	X5	Kandira	2494	Handl Char:
		Kasagga	2490	Comm Char:
		Kasaala Grovers	456	Inter Char:
		Kassanda	930	Withdr A'mt:
		Kaswa-Budoma	2425	Repay A'mt:
		Katikanyonyi	746	
		Kaweri Vamutulo	1407	Balance:
Crop Code		Kazwama	1783	
Cotton	A	Kiboga	633	
Coffee	B	Kibose	2415	
Other Crops	C	Kigali Kiribadde	686	
		Kijjungutte	4850	
		Kirangira	221	
		Kisalizi	1860	
		Kiwenda	964	
		Kungu	2452	
		Luwero Kezimbira	455	
		Lwampanga Fish	2578	
		Mhukiro	1657	
		Mubende Tw Multi	4384	
		Muyobozi	359	
		Nakasongola Grow	1755	
		Nakasongola Tr	3611	
		Nakitoma	1862	
		Namukanga	2029	
		Senuto	162	
		Wabusana	28	
		Wobulenzi	2605	

Appendix F

RURAL ECONOMIC RECOVERY PROJECT
CREDIT INFORMATION COMPLETE TRANSACTION LIST

Appr Date	Due Date	Tran Date	Int	Regi	Di	UCB	C	Appr A'mt	Comm Ch	Handl C	Inter Cha	Withdr A'm	Repay A'mt	Balance
14-Jun-88	1-May-89		1	1881	MU	X3	B	2,000,000						0
14-Jun-88	1-Apr-89		1	160	LU	X1	B	2,000,000						0
14-Jun-88	1-May-89		1	41	LU	X1	B	1,500,000						0
14-Jun-88	1-Apr-89		1	359	MP	X2	B	2,000,000						0
14-Jun-88	1-Mar-89		1	964	MP	X2	B	2,000,000						0
14-Jun-88	1-Apr-89		1	746	MP	X2	B	1,500,000						0
14-Jun-88	1-Apr-89		1	2492	MP	X2	B	1,000,000						0
14-Jun-88	1-Apr-89		1	2425	MU	X4	A	1,500,000						0
14-Jun-88	1-Apr-89		1	4850	MU	X4	B	1,000,000						0
14-Jun-88	1-Apr-89		1	2605	LU	X1	B	1,500,000						0
14-Jun-88	1-Apr-89		1	1657	LU	X1	B	1,500,000						0
14-Jun-88	1-Apr-89		1	28	LU	X1	B	1,500,000						0
14-Jun-88	1-Apr-89		1	1783	LU	X1	A	1,500,000						0
14-Jun-88	1-Mar-89		1	161	LU	X1	B	2,000,000						0
14-Jun-88	1-May-89		1	2415	LU	X1	B	1,500,000						0
14-Jun-88	1-May-89		1	1755	LU	X1	A	1,500,000						0
14-Jun-88	1-Apr-89		1	897	LU	X1	B	2,000,000						0
14-Jun-88	1-Apr-89		1	2029	LU	X1	A	1,500,000						0
14-Jun-88	1-Apr-89		1	2471	LU	X1	B	1,500,000						0
14-Jun-88	1-Mar-89		1	1860	LU	X1	A	1,500,000						0
14-Jun-88	1-Mar-89		1	435	LU	X1	B	2,000,000						0
14-Jun-88	1-Mar-89		1	852	MP	X2	B	2,000,000						0
15-Jun-88	1-May-89		1	221	MU	X4	B	1,000,000						0
15-Jun-88	1-Apr-89		1	456	LU	X1	A	2,000,000						0
16-Jun-88	1-May-89		1	2490	LU	X1	B	1,500,000						0
22-Jun-88	1-May-89		1	1862	LU	X1	A	1,500,000						0
22-Jun-88	1-Apr-89		1	930	MU	X3	B	2,000,000						0
27-Jun-88	1-May-89		1	1639	LU	X1	B	1,000,000						0
28-Jun-88	1-Apr-89		1	455	LU	X1	B	2,000,000						0
29-Jun-88	1-May-89		1	162	LU	X1	B	1,000,000						0
24-Jun-88	1-Jun-89		1	2774	MP	X2	B	1,500,000						0
24-Jun-88	1-Jun-89		1	886	MU	X4	B	1,000,000						0
1-Jul-88	1-Jun-89		1	342	MU	X3	B	1,500,000						0
6-Jul-88	1-Jun-89		1	1407	MU	X5	B	2,000,000						0
		31-Jul-88	1	1783	LU	X1			15,000		5,260	1,500,000		1,520,260
		31-Jul-88	1	1755	LU	X1			15,000		14,466	1,500,000		1,529,466
		31-Jul-88	1	2029	LU	X1			10,000		13,150	1,000,000		1,023,150
		31-Jul-88	1	2490	LU	X1			15,000		5,260	1,500,000		1,520,260
		31-Jul-88	1	1860	LU	X1			15,000		5,260	1,500,000		1,520,260
		31-Jul-88	1	2415	LU	X1			10,000			1,000,722		1,010,722
		31-Jul-88	1	2605	LU	X1			10,000		3,507	1,000,000		1,013,507
		31-Jul-88	1	887	LU	X1			10,000		6,575	1,000,000		1,016,575
		31-Jul-88	1	456	LU	X1			20,000		21,252	2,000,000		2,041,252
		31-Jul-88	1	28	LU	X1				6,989	9,191	698,900		715,080
		31-Jul-88	1	161	LU	X1			15,000		5,260	1,500,000		1,520,260
		31-Jul-88	1	1657	LU	X1			15,000		3,016	1,500,000		1,518,016
		31-Jul-88	1	455	LU	X1			14,878			1,487,800		1,502,678

Appendix G

RURAL ECONOMIC RECOVERY PROJECT
CREDIT INFORMATION COMPLETE TRANSACTION LIST

Appr Date	Due Date	Tran Date	Int	Regi	Di	UCB	C	Appr A'mt	Comm Ch	Handl C	Inter Cha	Withdr A'm	Repay A'mt	Balance
14-Jun-88	1-Apr-89		1	28	LU	X1	B	1,500,000						0
		31-Jul-88	1	28	LU	X1			6,989		9,191	698,900		715,080
14-Jun-88	1-May-89		1	41	LU	X1	B	1,500,000						0
14-Jun-88	1-Apr-89		1	160	LU	X1	B	2,000,000						0
14-Jun-88	1-Mar-89		1	161	LU	X1	B	2,000,000						0
		31-Jul-88	1	161	LU	X1			15,000		5,260	1,500,000		1,520,260
29-Jun-88	1-May-89		1	162	LU	X1	B	1,000,000						0
15-Jun-88	1-May-89		1	221	MU	X4	B	1,000,000						0
1-Jul-88	1-Jun-89		1	342	MU	X3	B	1,500,000						0
14-Jun-88	1-Apr-89		1	359	MP	X2	B	2,000,000						0
14-Jun-88	1-Mar-89		1	435	LU	X1	B	2,000,000						0
28-Jun-88	1-Apr-89		1	455	LU	X1	B	2,000,000						0
		31-Jul-88	1	455	LU	X1			14,878			1,487,800		1,502,678
15-Jun-88	1-Apr-89		1	456	LU	X1	A	2,000,000						0
		31-Jul-88	1	456	LU	X1			20,000		21,252	2,000,000		2,041,252
14-Jun-88	1-Apr-89		1	746	MP	X2	B	1,500,000						0
14-Jun-88	1-Mar-89		1	852	MP	X2	B	2,000,000						0
24-Jun-88	1-Jun-89		1	886	MU	X4	B	1,000,000						0
14-Jun-88	1-Apr-89		1	887	LU	X1	B	2,000,000						0
		31-Jul-88	1	887	LU	X1			10,000		6,575	1,000,000		1,016,575
22-Jun-88	1-Apr-89		1	930	MU	X3	B	2,000,000						0
14-Jun-88	1-Mar-89		1	964	MP	X2	B	2,000,000						0
6-Jul-88	1-Jun-89		1	1407	MU	X5	B	2,000,000						0
27-Jun-88	1-May-89		1	1539	LU	X1	B	1,000,000						0
14-Jun-88	1-Apr-89		1	1657	LU	X1	B	1,500,000						0
		31-Jul-88	1	1657	LU	X1			15,000		3,016	1,500,000		1,518,016
14-Jun-88	1-May-89		1	1755	LU	X1	A	1,500,000						0
		31-Jul-88	1	1755	LU	X1			15,000		14,466	1,500,000		1,529,466
14-Jun-88	1-Apr-89		1	1783	LU	X1	A	1,500,000						0
		31-Jul-88	1	1783	LU	X1			15,000		5,260	1,500,000		1,520,260
14-Jun-88	1-Mar-89		1	1860	LU	X1	A	1,500,000						0
		31-Jul-88	1	1860	LU	X1			15,000		5,260	1,500,000		1,520,260
22-Jun-88	1-May-89		1	1862	LU	X1	A	1,500,000						0
14-Jun-88	1-May-89		1	1881	MU	X3	B	2,000,000						0
14-Jun-88	1-Apr-89		1	2029	LU	X1	A	1,500,000						0
		31-Jul-88	1	2029	LU	X1			10,000		13,150	1,000,000		1,023,150
14-Jun-88	1-May-89		1	2415	LU	X1	B	1,500,000						0
		31-Jul-88	1	2415	LU	X1			10,007			1,000,722		1,010,729
14-Jun-88	1-Apr-89		1	2425	MU	X4	A	1,500,000						0
14-Jun-88	1-Apr-89		1	2471	LU	X1	B	1,500,000						0
16-Jun-88	1-May-89		1	2490	LU	X1	B	1,500,000						0
		31-Jul-88	1	2490	LU	X1			15,000		5,260	1,500,000		1,520,260
14-Jun-88	1-Apr-89		1	2492	MP	X2	B	1,000,000						0
14-Jun-88	1-Apr-89		1	2605	LU	X1	B	1,500,000						0
		31-Jul-88	1	2605	LU	X1			10,000		3,507	1,000,000		1,013,507
24-Jun-88	1-Jun-89		1	2774	MP	X2	B	1,500,000						0
14-Jun-88	1-Apr-89		1	4850	MU	X4	B	1,000,000						0

Appendix H

RURAL ECONOMIC RECOVERY PROJECT
 APPROVALS BY DISTRICT, BY CROP TYPE

Summary: #AVG Field: Appr A't

		Crop		
		A	B	ALL
		-----	-----	-----
D	LU	1,583,333	1,607,143	1,600,000
i	MP		1,666,667	1,666,667
s	MU	1,500,000	1,500,000	1,500,000
t	ALL	1,571,429	1,592,593	1,588,235
r				
i				
c				
t				

Appendix I

RURAL ECONOMIC RECOVERY PROJECT
LIST OF CREDIT APPROVALS

Appr Date	Due Date	Tran Date	Int	Regi	Di	UCB	C	Appr A'mt	Comm Ch	Handl C	Inter Cha	Withdr A'm	Repay A'mt	Balance
14-Jun-88	1-Apr-89		1	28	LU	X1	B	1,500,000						
14-Jun-88	1-May-89		1	41	LU	X1	B	1,500,000						
14-Jun-88	1-Apr-89		1	160	LU	X1	B	2,000,000						
14-Jun-88	1-Mar-89		1	161	LU	X1	B	2,000,000						
29-Jun-88	1-May-89		1	162	LU	X1	B	1,000,000						
15-Jun-88	1-May-89		1	221	MU	X4	B	1,000,000						
1-Jul-88	1-Jun-89		1	342	MU	X3	B	1,500,000						
14-Jun-88	1-Apr-89		1	359	MP	X2	B	2,000,000						
14-Jun-88	1-Mar-89		1	435	LU	X1	B	2,000,000						
28-Jun-88	1-Apr-89		1	455	LU	X1	B	2,000,000						
15-Jun-88	1-Apr-89		1	456	LU	X1	A	2,000,000						
14-Jun-88	1-Apr-89		1	746	MP	X2	B	1,500,000						
17-Jun-88	1-Mar-89		1	852	MP	X2	B	2,000,000						
24-Jun-88	1-Jun-89		1	886	MU	X4	B	1,000,000						
14-Jun-88	1-Apr-89		1	887	LU	X1	B	2,000,000						
22-Jun-88	1-Apr-89		1	930	MU	X3	B	2,000,000						
14-Jun-88	1-Mar-89		1	964	MP	X2	B	2,000,000						
6-Jul-88	1-Jun-89		1	1407	MU	X5	B	2,000,000						
27-Jun-88	1-May-89		1	1639	LU	X1	B	1,000,000						
14-Jun-88	1-Apr-89		1	1657	LU	X1	B	1,500,000						
14-Jun-88	1-May-89		1	1755	LU	X1	A	1,500,000						
14-Jun-88	1-Apr-89		1	1783	LU	X1	A	1,500,000						
14-Jun-88	1-Mar-89		1	1860	LU	X1	A	1,500,000						
22-Jun-88	1-May-89		1	1862	LU	X1	A	1,500,000						
14-Jun-88	1-May-89		1	1881	MU	X3	B	2,000,000						
14-Jun-88	1-Apr-89		1	2029	LU	X1	A	1,500,000						
14-Jun-88	1-May-89		1	2415	LU	X1	B	1,500,000						
14-Jun-88	1-Apr-89		1	2425	MU	X4	A	1,500,000						
14-Jun-88	1-Apr-89		1	2471	LU	X1	B	1,500,000						
16-Jun-88	1-May-89		1	2490	LU	X1	B	1,500,000						
14-Jun-88	1-Apr-89		1	2492	MP	X2	B	1,000,000						
14-Jun-88	1-Apr-89		1	2605	LU	X1	B	1,500,000						
24-Jun-88	1-Jun-89		1	2774	MP	X2	B	1,500,000						
14-Jun-88	1-Apr-89		1	4850	MU	X4	B	1,000,000						

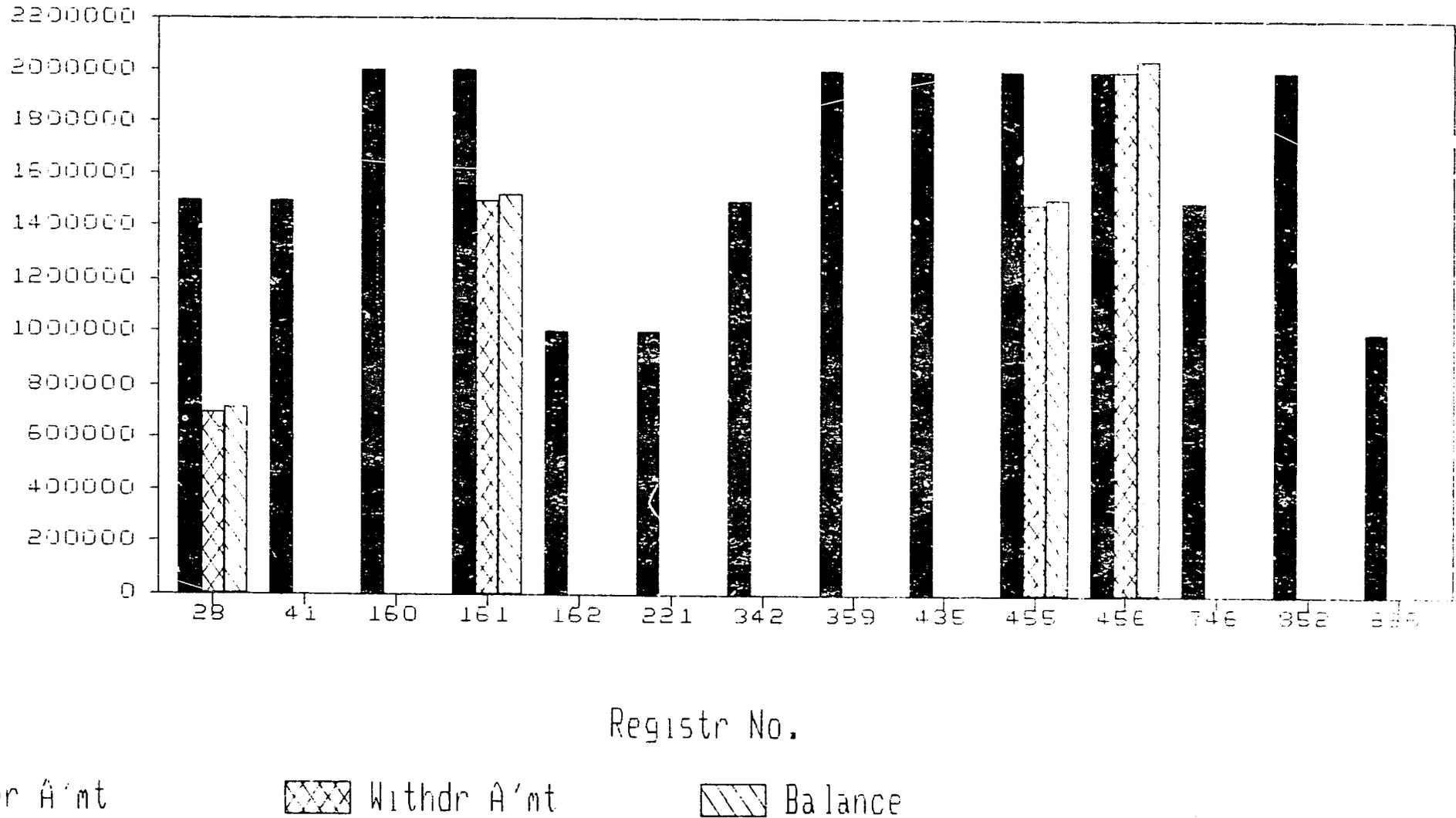
RURAL ECONOMIC RECOVERY PROJECT
 WITHDRAWALS IN LOWERO DISTRICT, UCB BRANCH XI

Appendix J

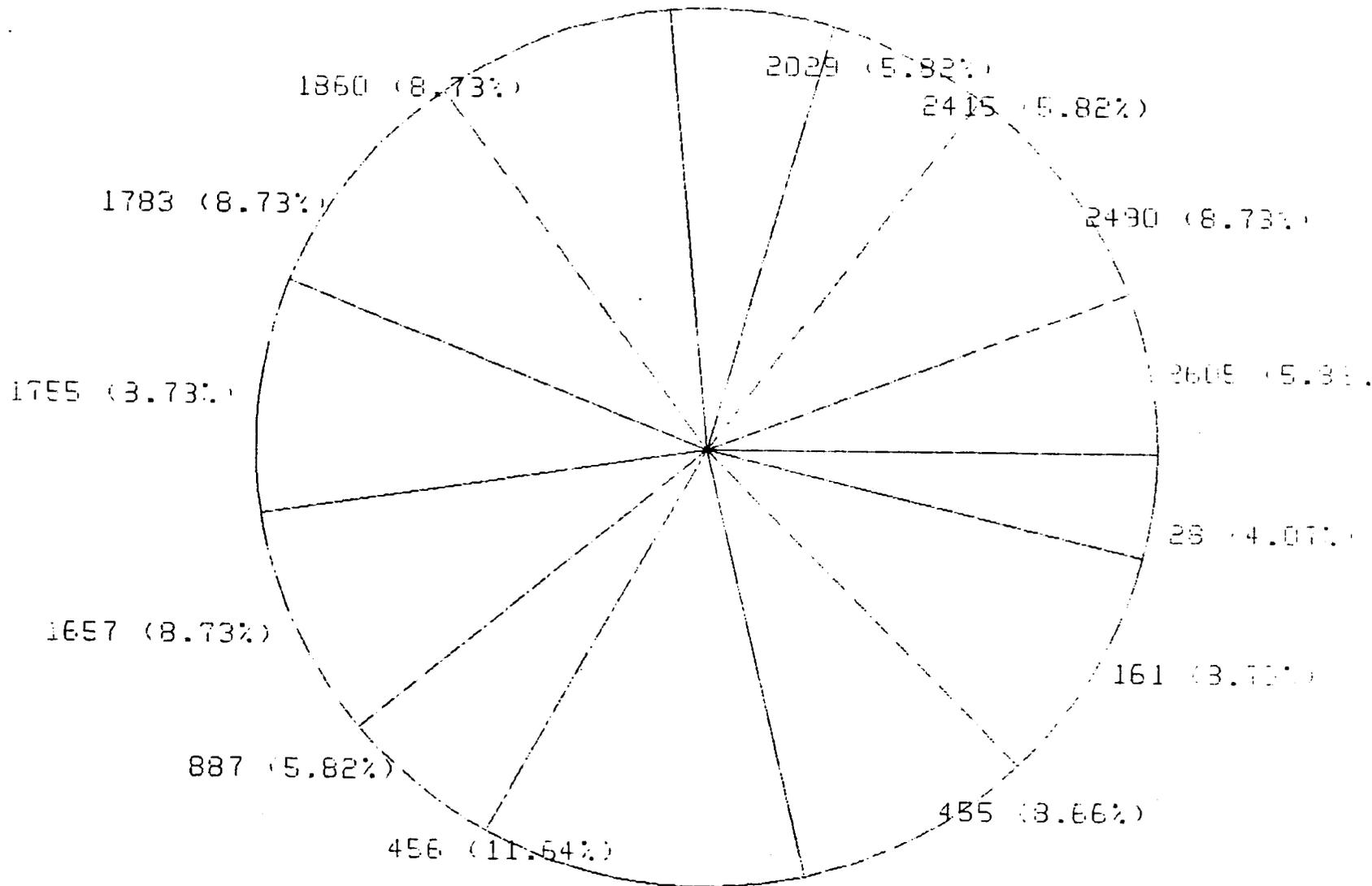
Appr Date	Due Date	Tran Date	Int	Regi	Di	OPP	C	Appr A'mt	Comm Ch	Handl C	Inter Cha	Withdr A'm	Repay A'mt	Balance
		31-Jul-88	1	28	LU	X1			6.989		3.191	698.900		715.080
		31-Jul-88	1	161	LU	X1			15.000		5.260	1,500.000		1,520.260
		31-Jul-88	1	455	LU	X1			14.878			1,487.800		1,502.678
		31-Jul-88	1	456	LU	X1			20.000		31.252	2,000.000		2,041.252
		31-Jul-88	1	887	LU	X1			10.000		6.575	1,000.000		1,016.575
		31-Jul-88	1	1657	LU	X1			15.000		3.016	1,500.000		1,518.016
		31-Jul-88	1	1755	LU	X1			15.000		14.466	1,500.000		1,529.466
		31-Jul-88	1	1783	LU	X1			15.000		5.260	1,500.000		1,520.260
		31-Jul-88	1	1860	LU	X1			15.000		5.260	1,500.000		1,520.260
		31-Jul-88	1	2029	LU	X1			10.000		13.150	1,000.000		1,023.150
		31-Jul-88	1	2415	LU	X1			10.007			1,000.722		1,010.729
		31-Jul-88	1	2490	LU	X1			15.000		5.260	1,500.000		1,520.260
		31-Jul-88	1	2605	LU	X1			10.000		3.507	1,000.000		1,013.507

CREDIT APPR., WITHDR., AND BAL., BY REG. NO.

31



TOTAL WITHDRAWALS BY REGISTRATION NO.



Registr. No.

As of: July 31, 1988
 Report Date: August 17, 1988
 Report Time: 11:16:17 am

Appendix M

RURAL ECONOMIC RECOVERY PROJECT
 SUMMARY OF CREDIT INFORMATION

Reg No	Distr	UCB Br	Intake No	Crop	App Amt	App Date	Due Date	Com't Chg	Handl Chg	Int Chg	Withdrawals	Repayments	Balance
24	LU	X1	1	B	1,500,000	14-Jun-88	1-Apr-89	6,989		9,191	698,900		0
Subtotal of this Reg. No.:								6,989		9,191	698,900		715,080
41	LU	X1	1	B	1,500,000	14-Jun-88	1-May-89						0
Subtotal of this Reg. No.:													0
160	LU	X1	1	B	2,000,000	14-Jun-88	1-Apr-89						0
Subtotal of this Reg. No.:													0
161	LU	X1	1	B	2,000,000	14-Jun-88	1-Mar-89	15,000		5,260	1,500,000		0
Subtotal of this Reg. No.:								15,000		5,260	1,500,000		1,520,260
162	LU	X1	1	B	1,000,000	29-Jun-88	1-May-89						0
Subtotal of this Reg. No.:													0
221	MU	X4	1	B	1,000,000	15-Jun-88	1-May-89						0
Subtotal of this Reg. No.:													0
342	MU	X3	1	B	1,500,000	1-Jul-88	1-Jun-89						0
Subtotal of this Reg. No.:													0
359	MP	X2	1	B	2,000,000	14-Jun-88	1-Apr-89						0
Subtotal of this Reg. No.:													0
435	LU	X1	1	B	2,000,000	14-Jun-88	1-Mar-89						0
Subtotal of this Reg. No.:													0
455	LU	X1	1	B	2,000,000	28-Jun-88	1-Apr-89	14,878			1,487,800		0
Subtotal of this Reg. No.:								14,878			1,487,800		1,502,678
456	LU	X1	1	A	2,000,000	15-Jun-88	1-Apr-89	20,000		21,252	2,000,000		0
Subtotal of this Reg. No.:								20,000		21,252	2,000,000		2,041,252

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RURAL ECONOMIC RECOVERY PROJECT
 SUMMARY OF CREDIT INFORMATION

Reg No	UCB Distr	Intake Br	No	Crop	App Amt	App Date	Due Date	Com't Chg	Handl Chg	Int Chg	Withdrawals	Repayments	Balance
Subtotal of this Reg. No.:								20.000		21.252	2.000.000		2.041.252
746	MP	X2	1	B	1.500.000	14-Jun-88	1-Apr-89						0
Subtotal of this Reg. No.:													0
852	MP	X2	1	B	2.000.000	14-Jun-88	1-Mar-89						0
Subtotal of this Reg. No.:													0
886	MU	X4	1	B	1.000.000	24-Jun-88	1-Jun-89						0
Subtotal of this Reg. No.:													0
887	LU	X1	1	B	2.000.000	14-Jun-88	1-Apr-89	10.000		6.575	1.000.000		1.016.575
Subtotal of this Reg. No.:								10.000		6.575	1.000.000		1.016.575
930	MU	X3	1	B	2.000.000	22-Jun-88	1-Apr-89						0
Subtotal of this Reg. No.:													0
964	MP	X2	1	B	2.000.000	14-Jun-88	1-Mar-89						0
Subtotal of this Reg. No.:													0
1407	MU	X5	1	B	2.000.000	6-Jul-88	1-Jun-89						0
Subtotal of this Reg. No.:													0
1639	LU	X1	1	B	1.000.000	27-Jun-88	1-May-89						0
Subtotal of this Reg. No.:													0
1657	LU	X1	1	B	1,500,000	14-Jun-88	1-Apr-89	15.000		3.016	1.500.000		1.518.016
Subtotal of this Reg. No.:								15.000		3.016	1.500.000		1.518.016
1755	LU	X1	1	A	1.500.000	14-Jun-88	1-May-89	15.000		14.466	1.500.000		1.529.466
Subtotal of this Reg. No.:								15.000		14.466	1.500.000		1.529.466
1783	LU	X1	1	A	1.500.000	14-Jun-88	1-Apr-89	15.000		5.260	1.500.000		1.520.260

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RURAL ECONOMIC RECOVERY PROJECT
 SUMMARY OF CREDIT INFORMATION

Reg No	UCB Distr	Intake Gr	No	Crop	App A'mt	App Date	Due Date	Comm't Chg	Handl Chg	Int Chg	Withdrawals	Repayments	Balance
					Subtotal of this Reg. No.:			15,000		5,260	1,500,000		1,520,260
1360	LU	X1	1	A	1,500,000	14-Jun-88	1-Mar-89	15,000		5,260	1,500,000		0
					Subtotal of this Reg. No.:			15,000		5,260	1,500,000		1,520,260
1862	LU	X1	1	A	1,500,000	22-Jun-88	1-May-89						0
					Subtotal of this Reg. No.:								0
1881	MU	X3	1	B	2,000,000	14-Jun-88	1-May-89						0
					Subtotal of this Reg. No.:								0
2029	LU	X1	1	A	1,500,000	14-Jun-88	1-Apr-89	10,000		13,150	1,000,000		0
					Subtotal of this Reg. No.:			10,000		13,150	1,000,000		1,023,150
2415	LU	X1	1	B	1,500,000	14-Jun-88	1-May-89	10,007			1,000,722		0
					Subtotal of this Reg. No.:			10,007			1,000,722		1,010,729
2425	MU	X4	1	A	1,500,000	14-Jun-88	1-Apr-89						0
					Subtotal of this Reg. No.:								0
2471	LU	X1	1	B	1,500,000	14-Jun-88	1-Apr-89						0
					Subtotal of this Reg. No.:								0
2490	LU	X1	1	B	1,500,000	16-Jun-88	1-May-89	15,000		5,260	1,500,000		0
					Subtotal of this Reg. No.:			15,000		5,260	1,500,000		1,520,260
2492	MP	X2	1	B	1,000,000	14-Jun-88	1-Apr-89						0
					Subtotal of this Reg. No.:								0
2605	LU	X1	1	B	1,500,000	14-Jun-88	1-Apr-89	10,000		3,507	1,000,000		0
					Subtotal of this Reg. No.:			10,000		3,507	1,000,000		1,013,507

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RURAL ECONOMIC RECOVERY PROJECT
 SUMMARY OF CREDIT INFORMATION

Reg No	Distr	UCB Br	Intake No	Crop	App A'mt	App Date	Due Date	Com't Chg	Handl Chg	Int Chg	Withdrawls	Repayments	Balance
2774	MP	X2	1	B	1,500,000	24-Jan-88	1-Jun-89						0
Subtotal of this Reg. No.:													0
4850	MU	X4	1	B	1,000,000	14-Jun-88	1-Apr-89						0
Subtotal of this Reg. No.:													0
Grand Total of all Reg. Nos.:								171.874		92.197	17,187.422		17,451.493