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SIX MONTH REPORTS NO.'s 6 & 7
December 1979 - November 1980

Michigan State University Contract Team
USAID Integrated Rural Development Project
ORD de l'Est, Fada N'Gourma, Upper Volta

Contract AID/afr-C-1314

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I. INTRODUCTION

After three and one-half years of field work in the Eastern Region of Upper Volta this combined report contains the 6th and 7th six month reports of the Michigan State University contract team. The team, part of the University's Department of Agricultural Economics, has been providing the Eastern ORD (Regional Development Organization) with program implementation and applied research technical assistance within the context of the USAID Integrated Rural Development Project.

Two six month reports have been combined due to MSU field personnel changes which occurred during the period of June through September 1980. This combined report primarily covers the field activities of the following MSU personnel for the periods indicated:

<u>Work Area</u>	<u>Team Member</u>	<u>Field Work Period</u>
1. Animal Traction and Livestock	Vincent Barrett	Dec. 1979-July 1980
2. Audio-Visual Technology	David Van Dyk	Dec. 1979-July 1980
3. Agricultural Credit	Thomas Stickle	Dec. 1979-May 1980
4. Agricultural Credit	Kifle Negash	June-Nov. 1980
5. Farm Level Economic Research	Greg Lassiter	Dec. 1979-Sept. 1980
6. Farm Level Economic Research	Pascal Fotzo	June-Nov. 1980
7. Marketing Research, Regional Planning	David Wilcock	Dec. 1979-July 1980.

The reader who has not read the previous five MSU six month reports may find the discussion of certain topics somewhat summary or incomplete. He is encouraged to consult these previous reports and other team documents for a more complete picture of major topics presented in the current report. A complete bibliography of documents produced by the MSU team is annexed to this report.

As stated in previous reports, the contract team welcomes any comments, criticism or requests for further information or material discussed in this report. Every effort will be made to respond directly in writing and to incorporate useful suggestions in future reports.

II. ANIMAL TRACTION

Substantial progress was made in the ORD animal traction program during the 8 month period from December 1979 through July 1980. The appointment of Mr. Kapioko Baoré as a counterpart to the Livestock Specialist in February 1980 assured the continuity of the program and a major portion of the specialist's time was spent working with him. Because of changes in the administrative structure and personnel at the ORD central office much time was spent on organizational matters and delineating lines of responsibility for the different program components.

A. Implementation

1. The specialist's activities were concentrated on streamlining the administrative processes involved in the supply of ANTRAC spare parts and accessories to area farmers. Local blacksmiths were given contracts for the supply of various parts such as plowshares.

2. The specialist developed a prototype of an ox drawn water lift system which was displayed at the E. ORD Agricultural Fair and which was subsequently installed on a model farm at Tiparka, near Fada. This system, which can irrigate gardens of up to 0.5 hectares, could significantly increase the amount of time animals are worked and help to amortize the high cost of animal feeding.

3. In collaboration with the ORD Audio-Visual Section, the specialist had a catalogue of ANTRAC equipment produced which should help extension agents improve the supply of equipment and correctly order spare parts.

4. In an effort to establish a clear statement of the goals and policy of the ORD ANTRAC program, Mr. Kapioko and the specialist wrote a short paper which was reviewed by ORD Sector chiefs at an open seminar in early June. The Sector chiefs appreciated this delineation of the program components and goals and made several recommendations for improvement of the paper.

5. Participation in the organization of the ORD's display on animal traction technology at the Agricultural Fair in Fada.

B. Research

1. In November 1979 the specialist undertook a study to evaluate the progress of the ANTRAC program. The results were presented in the Annual Report of the Animal Traction Sub-Section.¹ The major conclusions of the report are:

a. The oxen trainers (bouviers) are doing a very good job. They had trained the oxen of all farmers who had received their animals and equipment on time. Utilization rates of new traction units were significantly improved by their work.

b. The major bottleneck to improving the time worked by new animal units remained the timely delivery of equipment and credit for animal purchases. The lack of spare parts is becoming a major problem for older units.

c. Health care of traction animals is one of the most critical problems still facing the program. Only 26 percent of the animals in the sample

¹V. Barrett, Rapport Annuel de la Sous-Section Traction Animale, Section Machinisme, Bureau de la Production Agricole, ORD de l'Est, Fada, February, 1980.

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had been vaccinated and 21 percent of the oxen were idled at some point because of sickness.

d. The ORD's primary method of training farmers and extension agents has been through the use of the "cascade" method, described in earlier six month reports. While this has been somewhat effective in training agents, farmers have rarely benefited from it. Better control over the work of extension agents is necessary if this type of farmer training is to be effective.

2. In June and July 1980, the specialist wrote a report on a preliminary analysis of the 1978-79 Farm Level Survey. This report contained an institutional analysis of the ORD's ANTRAC program in historical perspective.¹

3. During this same period the specialist refined methods of determining cattle weights by body measurements as preliminary work to analyzing feeding data from the Farm Level Survey. The National Organization for Animal Resource Exploitation (ONERA) was very cooperative in providing facilities for the weighing and measuring of their cattle.

C. Training

1. A short training course for a second group of ORD animal trainers ("bouvier") was organized during February. This group also included five men who were being trained as livestock extension agents. These agents should greatly add to the ORD's capability for vaccinating work animals.

2. The specialist organized and participated in another series of short courses on ANTRAC which were held throughout the ORD. Farmers as

¹Much of the material in this report plus all other work on animal traction is contained in: Vincent Barrett, Gregory Lassiter, David Wilcock, Doyle Baker and Eric Crawford, "Animal Traction in Eastern Upper Volta: A Technical, Economic and Institutional Analysis," Michigan State University, Department of Agricultural Economics, East Lansing, Michigan, January 1981.

well as extension agents were included in these courses. The farmers took these courses very seriously and appreciated the chance to see new types of equipment demonstrated, (such as the use of a single-ox yoke, a chisel plow and a handheld seeder).

3. As mentioned earlier, a major portion of the specialist's time was spent working with his counterpart.

III. AUDIO-VISUAL TECHNOLOGY

During the fourth and final six month period of the audio-visual specialist's work in Fada,¹ the completion of the ORD Learning Resource Center's AV studio installations became the primary objective. Production of prototype graphic and sound learning aids continued in conjunction with practical technical training of the AV personnel.

A. Studio Installations

The major part of the specialist's time was absorbed with the installation of the graphic, radio, and photo studios. Local construction of the graphic designer's furniture and materials was completed in early March. The radio studio was in partial operation in April and during April and May construction continued on the photographic darkroom electrical and plumbing systems. These installations required major surgery to the space allotted to the LRC and it became a construction rather than a production site. Due to this construction, the audio-visual section was unable to complete in full its planned prototype production of AV aids. It became virtually impossible to work in any logical fashion around the constant interruptions caused by construction workers underfoot. It is hoped that

¹For a complete report on AV activities in the E. ORD over the September 1978-July 1980 period see, David Van Dyk, "Development of the Audio-Visual Capacity of the Eastern ORD of Fada N'Gourma, Upper Volta," Michigan State University, Department of Agricultural Economics, East Lansing, Michigan, November 1980. (Final Report of AV technician, available in English and French.)

the studios will have been completed by the end of the specialist's contract in August.

B. Equipment

As reported in the previous Six Month Report (No. 5):

"the USAID purchasing channel, using AAPC in New York, is unfortunately extremely slow, very costly, and a major constraint on the successful execution of this and other USAID field contracts in West Africa."

The Audio-Visual equipment ordered in December of 1978 has yet to be received in full. The material that has arrived in partial shipment has often been of inferior quality to that specifically ordered on the PIOC and some of this equipment will not sustain the rigors of the West African climate. One has to ask oneself why a presumably experienced organization such as AAPC would send a partial technical package when a complete system is essential. One example of this is the partial shipment of both 35mm and Super 8 film without shipment of the appropriate cameras. To date 80 percent of the equipment has arrived, yet it is the remaining 20 percent that is vital to begin AV production.

It is strongly recommended that USAID initiate an inquiry into the total incompetency of AAPC to act as a purchasing and shipping agency given their record of procuring inappropriate equipment and taking over a year to ship orders. This is particularly true since several contractors in Upper Volta have reported that equipment purchases made in the U.S. and shipped by their home offices generally have arrived in Upper Volta one to two months from the time of order.

C. Documentation

During the report period media van (cinébus) field trips have continued on a weekly basis to all sectors of the ORD. The cinébus operation

has assisted ORD training sessions, rural animation projects, regional agricultural fairs in addition to its village film showings and radio tape collection of field interviews, indigenous music and history. Over eighty hours of audio tapes have been collected and catalogued and these have formed the nucleus of the permanent audio tape collection of the ORD. These tapes are an invaluable resource material for future radio and literacy programs. Copies of these tapes are made available to interested parties at a nominal fee. Recently, the cinébus has begun to show full length French feature films in Fada N'Gourma and other towns and has brought the ORD considerable public service recognition. With the arrival of 16mm film projectors in February the field vehicle installation is complete and it is now possible to offer an array of technical information packages to the ORD extension program.

D. Training

Work shop training sessions continued in equipment operation and maintenance and in all areas of AV production. These sessions have included silk screen, graphic illustration, black and white photo and color slide presentations, and Super 8 film production. Prototypes produced during these training sessions are on display in the AV section office. Some of these materials have already been used in planning extension program campaigns and will hopefully be adapted to future ORD programs. The AV personnel have responded well to this form of practical, hands-on technical training and they have become both competent and professional in many AV production skills.

IV. AGRICULTURAL CREDIT

A. December 1979-May 1980 (Thomas Stickley)

The major accomplishments of the credit and cooperatives technician during the reporting period were the production of the results of the computerized management of the agricultural credit system, the establishment of the rural credit account and production of final reports after his departure from the field in May 1980.

1. Computerized Management of the Agricultural Credit System

The results of the computerized management technique of the agricultural credit system became available during the reporting period and a number of descriptive reports were written.¹

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 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

¹"Cahier de Charges pour la Gestion Automatisee des Credits Agricoles (Systeme Generalise)" by Thomas Stickley, Hamidou Dahany, Ouedraogo Etienne and Tiemtore Oumarou, CENATRIN, Ouagadougou, February 1980 and "The Computer-- An Appropriate Technology for Managing a Viable Agricultural Credit System in a Low Income Country--Upper Volta" by Thomas Stickley. Paper presented at the Annual Meetings of the American Agricultural Economics Association at the University of Illinois, Urbana/Champaign, Illinois, July 27-30, 1980.

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 automatically by the new ORD computerized system to help the extension/credit agents do their jobs more efficiently: bills to borrowers, lists of these bills, lists of live loans, lists of overdue loans, lists of paid-off loans, lists of borrowers who were over-charged/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. Many of these lists are used as part of the process of collecting outstanding credit payments due and monitoring the flow of funds to the central ORD offices.

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 and produced as the output of the system.

During the reporting period other work related to the computerized management system was done. Field extension/credit agents were given training on how to use the aids produced to help them do their jobs. Also the distribution of the bills for borrowers produced by the computer was completed. The distribution of the bills for loan repayment did not have a chance to produce the improved repayment rate expected because of a nationwide boycott of all credit disbursement and collection activities by the national union of Upper Volta government agricultural extension employees, that was in effect during the entire reporting period.

2. Rural Credit Account

The cash flow accounting system for the rural credit account was done for each fiscal year beginning April 1, 1974, and ending March 31, 1980.¹ This account was produced with five sections as follows:

1. Detailed presentation of the rural credit account (BND Account Number 405/72 344) by fiscal year from April 1, 1974 through March 31, 1980.
2. Summary of the rural credit account from April 1, 1974 through March 31, 1980.
3. Bank statement for rural credit account from April 1, 1976 through March 31, 1980.
4. Transfers between the rural credit account and the ORD Account.
5. Rural credit sub-account for U.S. Agency for International Development funds from April 1, 1974 through March 31, 1980.

3. Final Reports After Departure From Post

After his departure from post on May 23, 1980, the following reports were written: a final report which was couched in the context of capacity of the rural credit system of the Eastern ORD to absorb capital soundly,² and a report on the cereal bank experience in the Eastern ORD.³

B. June 1 to November 30, 1980 (Kifle Negash)

The activities in the technician's areas of responsibility at the E. ORD during the last six months are presented under the following categories:

¹"The Rural Credit Account of the Eastern ORD of Upper Volta" by Thomas Stickley, July 1980.

²"The Agricultural Credit System of the Eastern ORD of Upper Volta-- Final Report--June 1977 through July 1980" by Thomas Stickley, July 31, 1980.

³"Cereal Bank Experience of the Eastern ORD of Upper Volta" by Thomas Stickley, July 1980.

1. **Agricultural Credit and Cooperative Activities**
2. **Administrative Activities (as Field Team Leader)**
3. **Concluding Remarks.**

1. **Agricultural Credit and Cooperative Activities**

a. **Orientation.** An initial period was spent in orientation to ORD credit activities. This entailed studying existing documentation on topics related to the credit program of the E. ORD as well as on the activities of other institutions such as USAID/Ouaga, MDR (Ministry of Rural Development) CNCA (Caisse National Credit Agricole), and CENATRIN (The National Data Processing Center). Relevant persons were also interviewed in the aforementioned institutions. Furthermore, useful insights to the problems and the working procedures of the E. ORD were gained through field visits to different parts of the ORD and by attending the ORD Sector chief and Sector credit chief meetings held every month in Fada.

b. **Preparation of Plan of Work.** After consultation with the ORD director, colleagues in the Credit and Cooperative Section, USAID Ouagadougou and fellow team members, a plan of work for the period July 1 - May 30, 1981 was finalized.¹

c. **Activities Performed in the Credit and Cooperatives Section.** The work done in the section during the reporting period was focused on insuring the proper continuation of the computerized credit management and billing system developed for the short and the medium term agricultural credit in the Eastern ORD. The specific activities performed included the following:

¹This plan of work is available from the MSU team in Fada N'Gourma or from the Department of Agricultural Economics at Michigan State University.

1. Follow-up of monthly loan reimbursement status so that data will be ready for processing at CENATRIN to produce managerial aids and statistical reports.

2. Distribution of new loans, collection and coding of data, and facilitating the data processing work at CENATRIN. The distribution of individual bills to farmers and managerial and statistical reporting forms to ORD personnel will take place in December 1980.

3. Preparation of quarterly financial reports on the rural credit fund.

4. The statistical reporting output of the computerized credit system was analyzed and certain redundant or overly detailed reports were eliminated from the system. Also data processing for the updating of rural credit account loan files was changed from a monthly to a quarterly procedure.¹

5. Analysis of the total loan portfolio was performed by size of loan (in CFA) to assess the impact on borrowers of setting a minimum loan floor.¹

6. A background study was undertaken to assess the possibility of reviving the currently non-functional ORD Employees Credit and Savings Organization.¹

2. Administrative Activities

The work done in this area, always more time consuming than one would expect, include the following:

1. Mastering established MSU and ORD operations systems in accounting and billing; settling outstanding bills as they have been presented. The latter has often involved substantial discussion between MSU, the ORD and USAID/Ouaga.

¹Points 4 through 6 will be dealt with in more detail in the next six month report.

2. Pursuing possibilities for the execution of a regional road network study which has remained the ORDs top priority in terms of remaining studies in its three year regional planning program.

3. Coordinating MSU Field Team preparations for the visit to Fada N'Gourma of Mr. Douglas Bennet, USAID Administrator. This largely entailed preparation of a short paper summarizing the MSU team's accomplishments in the Eastern Region in the areas of applied research and ORD program implementation.¹

4. Other administrative activities have included setting-up bank accounts for the administration of the project Imprest Fund, accounting for Fund reimbursement, and assuring continuity in material supply, vehicle maintenance and personnel matters to facilitate team work. As reported in previous six month reports these latter activities have been the most time consuming. This situation was made worse by the unexplained disappearance of the locally hired administrative assistant.

3. Concluding Remarks

The performance of job tasks in the ORDs Credit and Cooperatives Section and as team leader have been influenced by a number of factors:

1. The June-November 1980 reporting period was one of transition for the Credit Section due to changes in administrative personnel. Much time was absorbed in adjustment to these changes.

2. The decision to adopt the CNCAs system in the ORDs was finalized in the reporting period but for the most part its relationship with established

¹MSU Field Team, "Un Bref Aperçu de l'Assistance Technique Fournie par l'Université de l'Etat de Michigan au Projet de Développement Rural Intégré de l'ORD de l'Est (DRI/USAID)," Fada N'Gourma, September 1980. Copies are available from Michigan State University.

ORD procedure, such as the computerized credit management system, has not been clearly defined.

3. The extension agent boycott in the early part of the reporting period has hindered credit payment collections and the timely disbursement of new loans. Both effects are likely to have negative impacts on the already low level of rate of reimbursement.

4. The 80 percent time allotted for credit activities in the plan of work could not be adhered to due to the absence of the team's administrative assistant from his post.

5. Finally, credit activities have been limited by the time required to resolve financial questions within a tight contract team budget: cost overruns at the CENATRIN Computer Center; unbudgeted costs for retraining field survey enumerators, covering ORD vehicle insurance, and contributing to paying for the ORDs electricity system; and escalating vehicle fuel costs. Without the cooperative attitude demonstrated by the E. ORD and USAID Ouagadougou resolution of these issues would have been impossible.

V. FARM LEVEL RESEARCH

A. December 1979-September 1980 (Gregory Lassiter)

This period was devoted entirely to computer processing of the 1978-79 farm survey data at CENATRIN in Ouagadougou. Our goal during this period, as outlined in the last six month report, was to complete the following tasks: keypunching, data editing, preliminary computer analysis of base files, publication of 4 preliminary reports, and construction of 8 aggregated data files. However, the amount of time necessary to complete these tasks was seriously underestimated.

1. Keypunching

While the 1978-79 data base has proved larger than originally estimated (220,000 cards versus 185,000 estimated in the last six months report), all but a few special files (comprising 3,000 cards) have been keypunched at CENATRIN as scheduled.

2. Data Editing

As described in the last report, our data editing procedure involves both manual and computer checking of each individual base file for data errors or inconsistencies. Because of the size, breadth, and disaggregated nature of the data base (220,000 cards, 88 base file, and 2,200 variables), the time required for data editing was three to four times the amount estimated. Since editing was a multi-stage process after which up to five versions of a given file could be maintained on tape, file management and

documentation alone proved to be enormously time consuming. By May, only two-thirds of the data editing (63 files of 145,000 cards) had been completed; the rest was completed by the end of August.

3. Preliminary Data Analysis and Reporting

During the data editing procedures, preliminary analysis was performed on the base files in order to provide results for a series of 4 preliminary reports. Because of data editing delays, our schedule for these preliminary computer analyses and resulting reports was jeopardized. Even with these delays every effort was made to maximize the availability of analyzed data as soon as reliable results were at hand. To this end a series of 7 reports were produced between March and August, 1980 on summary characteristics of sampled households, formal (ORD) and informal credit practices, animal traction, agricultural marketing, and crop production.¹

¹These reports, available from MSU or the USAID Mission in Ouagadougou, are as follows:

1. Lassiter, Gregory, "Note Préliminaire sur les Superficies Cultivées et la Taille des Ménages dans l'ORD de l'Est," B.A.E.P., ORD de l'Est, March, 1980 (French only).
2. Tapsoba, Edouard K., "Analyse Descriptive Préliminaire de l'Etude sur le Système Traditionnel de Crédit," ORD Fada, April, 1980 (French only).
3. Tapsoba, Edouard K., "Analyse Descriptive Préliminaire de l'Etude sur les Attitudes des Paysans envers le Crédit et l'Epargne," ORD Fada, April, 1980 (French only).
4. Lassiter, Gregory, "Caractéristiques Sommaires des Ménages Agricoles dans l'ORD de l'Est: Résultats Préliminaires de l'Enquête Micro-Economique 1978-1979," B.A.E.P., ORD Fada, July, 1980 (French only).
5. Barrett, Vincent, "Animal Traction in the Eastern ORD," ORD, Fada and agricultural Economics, MSU, July, 1980 (English only).
6. Quedraogo, Ismael and David Wilcock, "Les Activités de Commercialisation des Produits Agricoles et Animaux par les Ménages Paysans de l'ORD de l'Est (Fada): Résultats Préliminaires de l'Enquête Micro-Economique," B.A.E.P., ORD Fada, July, 1980 (French only).

4. Data Aggregation

The objective of much of the data processing effort has been to aggregate the 88 base files into 8 composite files that will permit far more efficient and useful analysis than is possible on the base files alone. For example, for field labor data the base file contains the number of hours every household member spent on every field activity in every field for each week of the cropping season. It is virtually impossible to analyze the data in this form. We must instead "add things up" so that we have categories such as total family labor spent on various sorghum/millet cropping activities in the month of July. This level of aggregation permits comparison among agro-climatic zones and makes possible more complete farm management economic analysis.

Two of these aggregate files, containing demographic characteristics and traditional credit transactions, were completed by January 1980. Four other files were completed by the end of August 1980.

The MSU Team intended to perform all phases of its data processing and analysis in Upper Volta to promote training of Voltaics in these techniques and to utilize the existing CENATRIN facility for this type of work. (This, too, could be seen as a training exercise for CENATRIN personnel.) While much of this objective was achieved certain tasks requiring the simultaneous manipulation of large amounts of data fully utilized the limited memory capacity and operating system of a machine which, up to that time, had been primarily used for simpler business (accounting and billing) and governmental functions (payroll, inventory, statistical record keeping).

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7. Baker, Doyle and Lassiter, Gregory, "Crop Production in the Eastern ORD: Preliminary Results from the 1978-79 Micro-Economic Survey," B.A.E.P., ORD Fada, August, 1980 (English and French).

B. June - November, 1980 (Pascal Fotzo)

The principal objective of my nine month assignment is to conduct a farm level survey of agricultural promotion in representative bottomlands ("bas-fonds") in the Eastern ORD. This survey is to complement the 1978-79 farm survey which focused primarily on dryland crop production. There is substantial interest in "bas-fonds" production in the Eastern Region due to the large amount of potentially highly productive land of this category only a small portion of which is currently being cultivated. The following activities to meet this objective have taken place during the six month reporting period.

1. Orientation and Plan of Work

Orientation to project objectives took place at MSU, in Ouagadougou and at the E. ORD. In-country orientation consisted of meetings in Ouagadougou with officials from USAID, Agricultural Services in the Ministry of Rural Development, SOVOLCOM, the Direction of External Trade, and the Upper Volta Rural Development Fund. The objective of these contacts was to gather information on quantifiable parameters likely to affect farmers' decision making such as price trends, production trends and import trends of rice since 1961 and also to gather information on national rice marketing and price policy. This secondary information will be useful to drawing policy implications from the analysis of farm level data.

Orientation of the E. ORD took place through: (1) meetings with the E. ORD personnel including the Director and the heads of the Bureaus of Economic Analysis/Planning, Agricultural Production, and Rural Works; (2) attendance of monthly ORD Sector Chief meetings; and (3) extensive travel to major "bas-fonds" production areas to develop familiarity with salient agroeconomic features and initiate contact with farmers with significant bottomland production in these zones.

As agreed in a joint MSU/E. ORD meeting in late May, a plan of work for the period July 1980 - February 1981 was drafted and presented to E. ORD, USAID Ouagadougou and MSU representatives all of whom approved it by mid-June 1980.¹

2. Training and Field Assignment of Enumerators

Enumerators were recruited from those who previously served in the 1978-79 farm survey carried out by the MSU Team in E. ORD. The 4 enumerators recruited for the bas-fonds study participated in a 4 day training course consisting of instruction in the purpose of the study and its objectives, definition of survey terms, interviewing techniques, how to approach the farmer, delineation of enumerator's responsibility, practice using the different survey forms, and planning of interviews. At the end of training, one enumerator was assigned in each of the following zones where he was to conduct 5 to 6 interviews per day:

- a. Lantaogo (Diabo Sector), traditional "bas-fonds" cultivation
- b. Diapangou (Fada Sector), improved "bas-fonds"
- c. Partiataga (Diapaga Sector), mixed traditional and improved "bas-fonds" systems
- d. Tapoa (Diapaga Sector), dam flood plane system, controlled irrigation.

3. Data Collection

After an initial period during which both enumerators and sample farmers gained understanding of the types of data sought, a majority of the data collection effort focused on:

¹This plan of work is available from the MSU field team or from the Department of Agricultural Economics, MSU, East Lansing, Michigan.

a. Inputs to agricultural production: all labor, land, financial and physical capital, and technology. Technology is understood here in a broad sense to include the timing and nature of field operations as well as the implements used.

b. Outputs of agricultural production: data on total yields of the major crops grown as well as sales of these crops.

Moreover, an effort is also being made to ascertain the role of non-cropping activities (in terms of labor time, production costs and earnings) in order to assess their competition with crop production which will help in evaluating the potential for expansion or intensification of the cropping activities studied. Another data collection effort is geared towards gathering information on quantifiable parameters likely to affect farmers decision making; these include the price trends, trends in soil degradation, historic patterns of field use, etc. The measurement of farmers fields has begun and of the 950 fields to be measured, 300 had been completed by November 1980.

In general, the collection of the basic input-output data as well as the field measurement have gone reasonably well. The questionnaires (18 survey forms) have performed well although some minor errors were identified early on and rectified by revising certain questionnaires.

4. Field Supervision, Office Editing and Code Construction

Because of the importance of close supervision throughout the cropping season, during July-November a major activity was to visit the enumerators as often as possible. Because of the dispersion of the research sites, great distances and poor roads, this proved to be a time consuming and often arduous task. On the average, each enumerator was visited on site every 12 days for the first 3 months (July-September), and every 18 days for the

last 2 months (October-November). The main activities during my supervision tours were:

- a. To assure that enumerators were on schedule
- b. To check over completed forms
- c. To deliver instructions, explanations and provide guidance
- d. To assure a prompt and coordinated delivery of materials
- e. To help the enumerators in organizing a work schedule to meet a strict study time table.

In general individual performance for all the 4 enumerators during the past 5 months has been very satisfactory. In addition these frequent field tours have provided the researcher with an opportunity to develop rapport with sample farmers and to conduct personal interviewing dealing with the performance of the farm business as a whole.

Organizing and editing the completed survey forms was a major activity during the months of August to November. For each of the 116 sample farmers surveyed, approximately 2,200 completed forms had to be sorted, organized and accounted for at the end of each major field activity period. Completed survey forms were checked in the office a final time, noting data errors, inconsistencies, illegible and incomplete responses, as had been done in the field since the beginning of the survey.

Data collection in the forms used in this survey have not been precoded and this necessitated setting up an adequate coding system as each questionnaire was being completed in the field. The coding format adopted was such that some data aggregation can be done by hand as the coding is carried out in ORD offices in Fada.¹

¹The codes used are contained in "Etude Agro-Economique des Bas-Fonds de l'ORD de l'Est: Livret de Codification," available from the MSU field team or the Eastern ORD.

5. Support to the Applied Research Section, E. ORD

Some time has been spent with the chief of the Applied Research Section in achieving the following:

- a. Restructuring the ORD Applied Research Section into 3 units:
 - Socio-economic research unit
 - Agronomic experiments unit
 - Animal husbandry research unit
- b. Defining:
 - the attributes of the Applied Research Section and its role in the farm level research in the E. ORD
 - what types of functional relationship this section should have with the various national research institutions and donor agencies interested in applied research in support of project implementation.

In terms of the latter point, the annual one-week national seminar on agricultural research was attended in Ouagadougou in October 1980. There were about 200 participants (mostly agronomists) from about 10 research institutes (IRAT, ICRISAT, IITA, etc.) and from the ORDs. The workshop was organized around the following subject matter areas: agronomy, crop protection, crop breeding, animal husbandry and farming systems research (FSR).

Concerning FSR and/or village level socio-economic studies, most institutes (IRAT, ICRISAT, ORSTOM, etc.) were still at the programming or initial phase and no results were discussed. The Applied Research Unit/E. ORD through MSU support has taken the lead in this area throughout Upper Volta and MSU final reports should make a valuable contribution to the next national seminar to be held sometime in March 1981 in Ouagadougou.

VI. APPLIED RESEARCH FOR ORD REGIONAL PLANNING

The E. ORDs three year program in regional planning has been described in previous six month reports.¹ The end of this reporting period (December 1980) coincides with the middle of the third year of this effort. An attempt was made during this period to initiate or complete any remaining priority data collection activities so that analyzed results would be available in early 1981 for synthesis into a five year development plan for the Eastern Region.

The MSU marketing economist and team leader, in addition to time-consuming administrative functions and participation in certain aspects of data collection for the 79-80 farm surveys and analysis of the 1978-79 results, had primary team responsibility for coordination and execution of activities in this area during the period December 1979 - November 1980. These activities are summarized in the following subject areas: general regional planning activities, small scale enterprise development, applied marketing research, and analysis of the regional road network.

A. General Regional Planning

The overall regional planning efforts benefited from two visits by MSU consultant Dr. Assefa Mehretu during February and June, 1980. These visits helped in the planning and data processing of a socio-economic inventory of 637 villages of the Eastern Region, resulted in a refinement

¹See MSU Team Six Month Reports No. 2 (August 1978) and No. 5 (January 1980) and the ten specific regional planning reports listed in the Bibliography annexed to this report.

of objective methods to be used in the allocation of social services to the region's population,¹ and provided a continuing assessment of progress being made in the overall planning effort.²

The village inventory was designed to provide a reliable planning data base for every officially recognized village in the Eastern Region. Data were also collected to permit planning in specific social service or basic needs areas: population and settlement patterns, inventory of social infrastructure, village water supply, village educational characteristics, village health characteristics, economic activities of a non-farm nature, articulation of rural markets and an overall assessment of village problems.

The 644 villages identified in the 1975 census of population were grouped into 56 data collection zones and an 8 page questionnaire was administered to village elders during the months of April and May 1980. About one-third of the villages were covered by the approximately 15 trained enumerators in the ORDs Applied Research Section; the other two-thirds were covered by extension agents in each ORD sector. Without the help of these latter ORD personnel this inventory could not have been completed in such a short period of time. Data was coded in ORD offices during the months of June and July 1980, and keypunching of data was completed at CENATRIN in Ouagadougou by the end of August. Detailed analysis of this data was completed in January 1981 and will be made available to the E. ORD for incorporation into its regional plan.

¹Assefa Mehretu, "Procedures for Locating Basic Needs Services in Rural Areas: An Application to Problems in the Eastern Region of Upper Volta," Department of Agricultural Economics, MSU, April 1980.

²Assefa Mehretu, "State of Progress in Data Collection and Regional Planning in the Eastern ORD of Upper Volta," Department of Agricultural Economics, MSU, July 1980.

This effort has resulted in a relatively compact file of data which can easily be accessed using the SPSS statistical programming package available at CENATRIN. The planning data base can be accessed by ORD sector, sub-sector and individual village with the latter spatially coded which can permit the production of computer-generated maps. The data base can easily be modified or added to which could facilitate its continued use for future regional planning work and other project-specific uses. Some utilization of this type has already taken place through assistance provided to the USAID-funded "Urban Functions in Rural Development" and "Local Revenue Administration" Projects and to a UNDP "Projet Habitat" also operating in the Eastern Region.

2. Small Scale Enterprise Development

In consultation with the USAID Rural Enterprise Development Project in the Eastern Region, a baseline survey of structural and employment characteristics of small non-farm enterprises in the areas of light manufacturing, agricultural and food processing and services (retail and other) was conducted concurrently with the above mentioned village inventory. The survey design was facilitated through consulting assistance provided by Dr. Enyinna Chuta of the ILO, Geneva through the MSU contract.¹ A complete census of 25 enterprise types (e.g. blacksmithing, grain milling, peanut oil processing, etc.) was conducted in approximately 190 villages. These villages included all villages over 2,000 population and about 20 percent of those under 2,000 population. Data collection, coding and keypunching

¹Enyinna Chuta, "Mission Report: Monrovia (Liberia) and Fada N'Gourma (Upper Volta)," Geneva, ILO, EMP/TEC, March 1980.

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were completed in Upper Volta and an data analysis was conducted at MSU and completed by January 1981.¹

Initial results from this survey indicated substantial promise for employment and income generation although more detailed economic and technological assessment is required to identify specific investment options appropriate both to private entrepreneurs and ORD sponsored cooperative village groups.

3. Applied Marketing Research

Work in this area was carried out by MSU local hire consultant Ismael Ouedraogo in collaboration with the MSU Marketing Economist and ORD personnel in the BAEP. This work was divided into two phases. In Phase I the marketing data from the 1978-79 farm survey was analyzed to provide a description of the magnitude and practices involved in farmer crop marketing "to the farm gate."² In Phase II the scope was widened to look at regional marketing systems primarily those for staple food grains. This involved the interviewing of different market channel participants and analysis of the grain marketing component of the 1980 village inventory described above.³

4. Regional Road Network Analysis

The E. ORD identified conducting a systematic regional road network analysis as its top remaining data collection priority in early 1980. This

¹David C. Wilcock, "Rural Small Scale Enterprises in Eastern Upper Volta: Survey Results," East Lansing, Michigan, Department of Agricultural Economics, Michigan State University, January 1981.

²This resulted in Ismael Ouedraogo and David C. Wilcock, "Les Activités de Commercialisation des Produits Agricoles et Animaux par les Manages Paysans de l'ORD de l'Est," B.A.E.P., ORD Fada, July 1980.

³A complete report incorporating both Phase I and Phase II results will appear in March 1981: Ismael Ouedraogo and David C. Wilcock, "Market Places, Traders and Grain Marketing in Eastern Upper Volta," East Lansing, Michigan, Department of Agricultural Economics, Michigan State University.

is because of the very poor development of this road network which impedes rural development progress and because potential donor groups need such an analytical framework within which to locate their specific planning for road construction or upgrading.

To make a start towards meeting this objective the MSU team and the E. ORD invited James Hradsky of the USAID/REDSO/Abidjan office to prepare a scope of work for such a study. This was completed in May 1980.¹ Due to funding constraints, the MSU team could not undertake this study and USAID/Ouagadougou was requested in June 1980 to search for a solution to the relatively modest funding requirements for this critically needed regional planning survey.

¹See "Memorandum on Transportation Planning in E. ORD" and accompanying "Sample Terms of Reference: E. ORD Regional Transportation Planning," James Hradsky, REDSO/WA, May 5, 1980.

ANNEX

MICHIGAN STATE UNIVERSITY
UPPER VOLTA TECHNICAL
ASSISTANCE TEAM
CONTRACT USAID-ofr-C-1314

USAID INTEGRATED RURAL
DEVELOPMENT PROJECT
FADA N'GOURMA, UPPER VOLTA

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