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AGRICULTURE SURVEY AND ANALYSIS

PROJECT PAPER

SUPPLEMENT

OAR/Rwanda

July, 1985

ACTION MEMORANDUM FOR THE AID REPRESENTATIVE

9/13/85

FROM: PRM, Rose Marie Depp *RMD*

SUBJECT: Agriculture, Survey & Analysis (696-0115) - Project Paper Supplement

I. PROBLEM: Your approval is requested of the attached Project Paper Supplement for the Agriculture Survey and Analysis (ASA) Project, which documents changes made in the project and reprograms remaining funds and proposes that the PACD be extended from September 30, 1985 to March 30, 1987, and recommends an additional source-origin waiver for the purchase of vehicles. No additional funding is required.

II. DISCUSSION: The ASA Project was approved in March 1981 with life of project funding of \$3,706,000. All funds have been obligated.

During the last several months, an intensive financial and project review has been completed to determine (1) the continuing validity of the project purpose (2) how the inputs originally planned compare with the inputs actually provided, (3) additional activities which need to be completed before the end of the project, (4) the amount of remaining unearmarked funds, and (5) whether the project objectives can be achieved by the current PACD.

In summary, the mission found that the project purpose is still valid but that it is advisable to undertake an additional survey on the relation of prices and food availabilities in Rwanda. The mission also determined that there is insufficient time left in the project to accomplish the remaining activities and that a reallocation of project funding among project elements is required. The following table summarizes this reallocation.

<u>Project Element</u>	<u>Current Allocation (\$000)</u>	<u>Proposed Allocation</u>
Technical Assistance	2,375	1,645
Training	260	370
Commodities	425	305
Construction	170	136
Local Costs	476	1,250
	-----	-----
TOTAL	3,706	3,706

The proposed reallocation represents expenditures for technical assistance at a lower level than originally estimated because the full complement of technical assistance was not provided by the project; less expenditures for training than foreseen because of difficulties in locating qualified Rwandans for overseas training; lower than estimated commodity and construction costs, and most significantly, a far greater requirement for local cost support than was budgeted in the Project Paper.

In addition, your approval is requested for purchase of vehicles. The justification for this purchase is contained in Annex V to the Supplement. This justification also requests an increase in the value of previously approved waivers and authority to change the commodity description in these already approved waivers. The revised requirements are sufficient to meet the need for additional vehicles until the proposed new PACD of March 1987.

The project analyses contained in the original Project Paper remain valid and no other actions are needed prior to your approval of this Supplement. All other terms and conditions of the original Project Paper remain unchanged.

The mission Project Review Committee and the Rwandan Project Director reviewed and approved this Supplement On July 25, 1985.

On August 15, 1985, the REDSO project committee reviewed the Supplement and raised three issues (see Nairobi 27935). These included (1) RFMC indicates there is \$18,000 less for reprogramming than estimated in the Supplement, (2) concern for the lack of training of long-term participants; and (3) the manner in which the Supplement presented the justification for use of the previously approved source-origin waivers and the request for a new waiver for vehicle purchases.

In response to these issues the following is recommended:

(1) RFMC Records. There are several bookkeeping questions which remain and the difference of \$18,000 is not significant. OAR will continue to work with RFMC to correct these problems but no changes have been made in the Supplement figures. Mr. Lerner will have primary responsibility for this action.

(2) Two actions are recommended in addition to those included in the Supplement with respect to training. First, REDSO recommends we investigate a Tunisia facility which has training capability in agricultural statistics analysis; Mr. Nkurunziza will send a cable to obtain information. Secondly, AFR/TR/EHR has advised that we may request S&T to arrange staged graduate training programs that would allow approximately a six-month training period in the U.S. followed by return to Rwanda for a work study period, and then return to the U.S. for another formal training period. This pattern would continue until the degree is obtained. This system is feasible and has AID/W support.

(3) Waivers. REDSO recommends a three step approach to amending the previously approved source origin waivers and issuance of an additional waiver for vehicles. These included (i) issue new source origin waiver for the new vehicle procurements; (ii) prepare a PIL changing the description in the original PP of the vehicles to have been procured to conform with actual purchases; and (iii) prepare a memorandum to the file noting that the vehicle procurement cost exceeded the original estimates by approximately seven percent. REDSO's first recommendation has been accepted and the waiver justification contained in the Supplement has been redrafted to cover only the new acquisitions. In lieu of issuing a PIL, OAR has

elected to prepare a memoranda to the file noting the changes and circumstances in changing the description included in the original PP. It is the Mission's Project Officer's opinion that issuing a PIL for this is unnecessary and cumbersome. Recommendation number three has been accepted; Ms. Depp will draft the memo to files.

RECOMMENDATION: That you approve the attached Project Paper Supplement and simultaneously approve extension of the PACD from September 30, 1985 to March 30, 1987 and purchase of the vehicles justified in Annex V.

APPROVED: Eugene Chavawoti

DISAPPROVED: \_\_\_\_\_

DATE: Sept 17, 1985

CONCURRENCE: \_\_\_\_\_  
John W. Koehring  
REDSO/Director

Attachments: Nairobi 27935  
PP Supplement

Drafted: OAR/R: PHM: RMD: Depp: 9/16/85

Clearances:

ADO: MFuchs-Carsch draft  
MGT: Blerner draft  
SSA: ERobins draft  
REDSO/RLA: draft  
RIMC: RHenrich draft  
REDSO/D/DIR: AFell draft

4

AIDAC

E.O. 12356: N/A

SUBJECT: RWANDA - REDSO CONCURRENCE TO EXTEND PACD OF  
THE AGRICULTURAL SURVEY AND ANALYSIS PROJECT - (696-0115)

REF: MEMO LERNER/GRAHAM 8/1/85

1. DECISION:

THE RLA AND RFMC CLEAR THE PP SUPPLEMENT FOR THE SUBJECT PROJECT. THE REDSO/ESA DIRECTOR CONCURS IN THE EXTENSION OF THE PACD FOR A PERIOD OF EIGHTEEN (18) MONTHS THRU MARCH 30, 1987.

2. SUMMARY OF THE REVIEW MEETING:

THE REVIEW MEETING OF THE PP SUPPLEMENT WAS HELD ON THURSDAY AUGUST 15, 1985, CHAIRED BY REDSO DIRECTOR, JOHN KOERING, AND ATTENDED BY REDSO'S DEPUTY DIRECTOR, RFMC, REDSO AGRICULTURAL DIVISION, A REGIONAL SUPPLIES OFFICER, AND A PROJECT OFFICER. THE PRINCIPAL ISSUES DISCUSSED WERE:

A) BALANCE OF PROJECT FINANCES

RFMC INDICATED THAT THEY WERE UNABLE TO RECONCILE THEIR RECORDS WITH THE REMAINING BALANCE OF FUNDS SPECIFIED IN THE PROJECT PAPER SUPPLEMENT. RFMC'S ANALYSIS INDICATES THAT THERE ARE NEARLY DOLS.18,000 LESS MONEY AVAILABLE FOR RE-PROGRAMMING PROJECT ACTIVITIES THAN IS INDICATED IN THE PP SUPPLEMENT. NEVERTHELESS, THIS DISCREPANCY CAN EASILY BE COVERED BY THE CONTINGENCY LINE ITEM. CAR/RWANDA AND RFMC WILL CONTINUE RECONCILING THEIR FIGURES.

B) TRAINING FOR RWANDA STAFF

THE REVIEW MEETING PARTICIPANTS HIGHLIGHTED THE CRITICAL NATURE OF STAFF TRAINING FOR BOTH THE PP SUPPLEMENT AND ANY FOLLOW-ON ACTIVITY. THE TRAINING PROBLEMS WHICH HAVE BEEN ASSOCIATED WITH THE PROJECT WERE REPORTED TO THEM FROM: 1) A LACK OF QUALIFIED NOMINEES AND, 2) LOW LEVELS OF ENGLISH PROFICIENCY. WHILE IT WAS CLEAR THAT THE PRINCIPAL FOCUS OF THE PP SUPPLEMENT IS TO CLOSE OUT THE PROJECT ACTIVITIES (ESPECIALLY THE AGRICULTURAL SURVEY) EFFORTS SHOULD BE INCLUDED IN THE SUPPLEMENT

5

WHICH WILL PROVIDE THE BEST POSSIBLE INSTITUTIONAL BASE FOR THE FOLLOW-ON PROJECT. THE REVIEW MEETING RECOMMENDED THAT THE OAR/RWANDA EXAMINE OPPORTUNITIES FOR UTILIZING FACILITIES IN TUNISIA, WHICH HAS HAD CONSIDERABLE EXPERIENCE IN PROVIDING TRAINING IN AGRICULTURAL STATISTICAL ANALYSIS. LIKEWISE, WITH RESPECT TO THE UP-COMING PID FOR THE FOLLOW-ON PROJECT, THE MEETING WISHED TO ADVISE THE OAR/RWANDA THAT BOTH IN TERMS OF AN INSTITUTIONAL AFFILIATION AND A SOURCE OF TRAINING THE STATISTICAL RESEARCH SERVICE OF THE USDA COULD BE BETTER PLACED THAN A U.S. UNIVERSITY, PRIVATE SECTOR, OR INTERNATIONAL RESEARCH CENTER AS PROPOSED IN PAGE FOUR OF THE PROJECT SUPPLEMENT.

ANOTHER TRAINING ISSUE, WHICH WAS NOTED BY THE REVIEW, INVOLVED THE PARTIAL FUNDING OF LONG-TERM TRAINING PARTICIPANTS. WHILE FINANCING FOR THE FOLLOW-ON PROJECTS ANTICIPATED, THE OAR/RWANDA COULD UTILIZE EXCEPTIONAL FUNDING THROUGH PDS OR THE AMDP PROJECT IF NECESSARY, TO ANALYZE THIS TRAINING IF THE FOLLOW-ON PROJECT IS DELAYED.

#### C) WAIVERS

THE REVIEW MEETING FOUND THE PROPOSAL TO EXTEND THE EXISTING SOURCE/ORIGIN PROCUREMENT WAIVER FOR PREVIOUSLY PURCHASED AND TO-BE PURCHASED COMMODITIES UNACCEPTABLE. INSTEAD, A THREE STEP PROCESS IS RECOMMENDED. FIRST, A NEW SOURCE ORIGIN WAIVER IS REQUIRED FOR: ONE FOUR WHEEL DRIVE VEHICLE, ONE SEDAN, AND TEN MOTORCYCLES. SECOND, A FILE SHOULD BE PREPARED FOR GOR SIGNATURE WHICH INDICATES THAT AID AND THE GOR AGREE THAT THREE PICK-UPS, ONE FOUR WHEEL DRIVE VEHICLE, AND TWO ADDITIONAL MOTORCYCLES WOULD BE PROCURED IN LIEU OF EVEN SEDANS ENVISIONED IN THE ORIGINAL PROJECT PAPER. THIRD, A MEMORANDUM TO THE FILE IS REQUIRED TO NOTE THAT THE VEHICLE PROCUREMENT EXCEEDED THE ESTIMATED U.S. \$129,000 VALUE OF THE AUTHORIZED SOURCE/ORIGIN WAIVER BY DOLS. 8,100 OR 7 PERCENT. THE MEETING'S VIEW IS THAT THIS IS WITHIN AN ACCEPTABLE LEVEL SINCE PROCUREMENT WAIVERS ARE BASED UPON BEST ESTIMATES.

#### D) EVALUATIONS AND AUDITS

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THE REVIEW MEETING NOTED THAT FINANCING FOR EVALUATIONS  
AND AUDITS HAD NOT BEEN INCLUDED IN THE PP SUPPLEMENT.  
THE PARTICIPANTS ASSUMED THAT THE DEVELOPMENT OF THE PID  
AND THE PP FOR THE FOLLOW-ON PROJECT WOULD SUFFICIENTLY  
EXAMINE THE PROJECTS PROGRESS AND FINANCIAL  
ACCOUNTABILITY. THOMAS

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## TABLE OF CONTENTS

### I. BACKGROUND AND RATIONALE FOR PROJECT PAPER SUPPLEMENT

- A. Introduction and Background of the Project
- B. Project Performance to Date
- C. Rationale for Project Paper Supplement
- D. Definition of Function and Priority of Activities
- E. Marketing and Price Study and ASAU Pricing Information System
- F. Preparing a Phase II Project

### II. PROJECT PURPOSE AND OUTPUTS

- A. Purpose
- B. Project Outputs

### III. PLANNED VERSUS REQUIRED INPUTS

- A. Technical Assistance
- B. Training
- C. Commodities
- D. Construction
- E. Local Costs

### IV. REQUIRED ACTIONS

- A. Technical Assistance
- B. Training
- C. Commodities
- D. Local Costs and Revision of Project Agreement
- E. Extension of PACD

8

## TABLES

- Table 1 - Summary Financial Status
- Table 2 - Technical Assistance
- Table 3 - Planned vs. Actual Training To Date
- Table 4 - Long-Term Training Plan
- Table 5 - Commodities - Planned versus Actual Procurement and Expenditures
- Table 6 - Approved Source-Origin Waivers
- Table 7 - Actual Vehicle Purchases
- Table 8 - Planned versus Actual Local Costs
- Table 9 - Projected Local Costs
- Table 10 - Remaining Funding Requirements
- Table 11 - Proposed Reallocation of Funds Among Project Elements

## ANNEXES

- I. Marketing and Price Study and ASAU Pricing Information System
- II. Training Provided To Date
- III. Terms of Reference: Social Scientist/Policy Analyst
- IV. Proposal for the Acquisition of Remaining Micro-Computers for SKSA
- V. Justification for Use of Previously Approved Source-Origin Waivers
- VI. Comparison of Obligation Amounts
- VII. Evaluation

## ACRONYMS

ASA	Agriculture Survey Analysis
ASAU	Agriculture Survey Analysis Unit
FRW	Rwandan Francs
GOR	Government of Rwanda
MACS	Mission Accounting Control System
MSU	Michigan State University
OAR/R	Office of the AID Representative/Rwanda
PACD	Project Assistance Completion Date

## I. BACKGROUND AND RATIONALE FOR PROJECT PAPER SUPPLEMENT

### A. Introduction and Background of the Project

In response to a call for a World Agricultural Census by FAO in 1980, the Government of Rwanda (GOR) requested AID to establish an office for agricultural statistics in its Ministry of Agriculture and Animal Husbandry. Thus, the Agricultural Survey and Analysis Unit (ASAU) was created in June 1981 under the Agricultural Survey and Analysis Project (ASAP). The ASAU was charged with the development of an up-to-date statistical profile of Rwandan agriculture as well as the task of collecting agricultural information for food emergency planning, short term policy making and strategy formulation. It was anticipated that by the end of the project in December 1985, the ASAU would have:

- a) significantly improved the availability and reliability of information needed to manage the agricultural sector; and
- b) proven its capability for data collection processing and analysis for policy formulation and agricultural planning.

The Agriculture Survey and Analysis Project was authorized in March, 1981 at a total estimated cost of \$4,691,000 of which AID was to contribute \$3,706,000 for long and short term technical services, participant training, commodities, construction, local costs and evaluations. The GOR agreed to contribute the equivalent of \$985,000 representing salaries, land, maintenance and operating costs. The AID contribution to the Agriculture Survey and Analysis Project has been provided incrementally in FY 81 (\$1,665,000), FY 82 (\$1,379,000) and in FY 83 (\$662,000).

Much of the Project's design was completed in 1979 during a pre-project phase funded by PDS funds and by GOR. During this phase, REDSO and U.S. Bureau of the Census (BUCEN) specialists worked in close collaboration with GOR counterparts to test, evaluate and modify survey methodology.

Upon negotiation and signature of the Project Grant Agreement in May 1981, the following survey and analysis activities were scheduled:

- 1) Survey preparation: a one-year preparation phase to build up the ASAU staff, begin short term training in the U.S. for qualified Rwandan candidates, pre test and revise survey methodologies and questionnaires, develop data processing procedures, write training manuals, and construct an office.
- 2) Pilot Survey: a one year "dress rehearsal" of the full survey to be carried out on a sample of 710 households.
- 3) Full Survey and Analysis Phase: a three year phase with three components:
  - a) a 1/2 year period to modify survey methodology based on experience from the pilot survey;
  - b) a 1 year "full" survey of 2,100 agricultural households; and,

c) a 1 1/2 year period to analyze and publish the "full" survey results, including comparisons with results of the pilot survey.

B. Project Performance to Date

The project activities were to generate the following specific project outputs:

- 1) the establishment of a functioning agricultural statistics and analysis unit in MINAGRI with a trained survey and analysis staff;
- 2) specifically designed computer programs and data collection procedures;
- 3) a pilot survey including pretesting of data collection and computer processing procedures as well as publication of results;
- 4) a national agricultural survey; and
- 5) statistical, analytical and methodological documents for future use by MINAGRI and MINIPLAN.

To date, outputs 1, 2, 3 and 4 have been essentially accomplished. Output 5, results and other reports from the full survey, will be written and completed by September 1986. The analysis element of the project, especially the training of Rwandans to staff the ASAU, has been hindered throughout by a lack of candidates for higher degree training. As a result, ASAU's second objective, "proven capability for data collection, processing and analysis for policy formulation and agricultural planning," will be only partially realized by the end of the project. Although ASAU has proven its capability to collect and process agricultural information, it still must demonstrate and institutionalize its capability to analyze this information and to inform agricultural policy makers.

C. Rationale for Project Paper Supplement

The purpose of this Supplement is to document changes that have been made in the project and to reprogram project inputs and funding in order to increase the analytical capacity of the ASAU. Also, it is proposed to prepare for a Phase II program of institutional support in agricultural policy and analysis. To accomplish these tasks, it is recommended that the Project Assistance Completion Date (PACD) be extended from September 30, 1985 to March 31, 1987.

The project has been evaluated twice, the most recent of which dated February 1985, is attached as Annex VII. This evaluation concluded that an effective national structure for the collection and processing of agricultural statistics has been established. The major shortcoming mentioned in the evaluation was in the development of local analytical expertise. Only three of seven headquarter staff are in place and the technical assistance provided has not been of the high analytical capacity envisaged in the PP. Thus, while ASAU has succeeded in conducting an agricultural survey, its analytical function and institutional base within the government are still evolving. As expected, the developing capacity of ASAU has also created demands to carry out other surveys such as a crop deficit estimation during the 1984 drought.

Requests to conduct surveys on prices, storage practices, soil erosion and monitoring other donor agricultural projects can be expected to increase. Thus, establishing work priorities and finding ways to maintain and use field staff have also to be addressed.

The 18 month extension - from September 1985 to March 1987 - will focus on the following activities :

- (1) completion of the planned agriculture survey and analysis;
- (2) training of local staff and providing on-the-job experience;
- (3) improving analytical capacity (expatriate and local);
- (4) defining work tasks and criteria for establishing work priorities;
- (5) determining and defining institutional relationships;
- (6) establishing a cooperative relationship with the Michigan State University Food Security Project;
- (7) determining the nature and extent of future support in a Phase II project;
- (8) undertaking other surveys and studies as time and resources allow based on priorities established by the GOR and AID.

#### 1. Completion of the Agriculture Survey and Analysis

The Project was approved in January 1981, the Project Agreement was signed in May 1981 and the actual project start up was in June 1981. Difficulties in recruitment of the agriculture economist delayed his arrival until 1983. The pilot survey was completed in October 1982, the data collection for the full agriculture survey was completed in October 1984 and the analysis and publication of the full survey results will be completed in September 1986.

#### 2. Rwandan Staffing

The lack of personnel to fill the seven positions in the Ag Survey Office has handicapped the institutional development of the project. Only two of the six planned participants have been trained and employed. They and the Director are the only permanent professional staff. No agricultural economist has been available. While this problem cannot be totally solved during this extension the following steps are planned:

1) Two of the most capable field supervisors will be brought to headquarters for on-the-job training and to determine their suitability and interest in further formal training.

2) A commitment by the GOR to identify two BA-level social science graduates for a three month internship with the project to be followed by long term training in Agriculture Economics. These persons will be assigned to ASAU for at least two years.

The project and OAR/R will have to be aggressive in recruitment. If such an effort does make progress during this extension it could seriously jeopardize the feasibility of any Phase II program.

### 3. Improved Analytical Capability

ASAU's analytical capability can be improved in the short term by using expatriate staff and consultants. The current U.S. technical assistant has done a good job with management of the survey and can help to complete the descriptive write-up for the survey reports. In addition, short term consultants with more analytical background will be used between now and the end of the project to assist in the analysis of the full survey data and to provide on-the-job training. In the long term Rwandan staff must be trained and retained in the ASAU as discussed in C. 2 above. OAR/R will need to explore in detail all aspects of the civil service to determine the range of incentives which may be needed to retain and/or hire staff.

#### D. Definition of Function and Priority of Activities

ASAU is currently a semi-autonomous unit of the Ministry of Agriculture, Livestock and Forestry (MINAGRI) established to conduct the agriculture survey and other survey and analysis work. This arrangement has been adequate to achieve the objectives set for the project and there may be no need to change. The question which should be addressed over the period of the extended project is whether the GOR wants this unit to remain in its limited role or to evolve to a larger function in informing the policy and planning process in the agriculture sector. In most cases, as policy discussions cross ministerial lines, development of inter ministerial relationships may prove necessary.

While the project paper did not explicitly so state, it was always foreseen that the ASAU would evolve into a permanent office in the Ministry for Agriculture to conduct surveys, to analyze data for agricultural planning and to evaluate projects. It is obvious that once a capacity to conduct and analyze data is in place, demands on ASAU are likely to grow rapidly. Over the past few years the unit was approached to participate in a soil erosion study, a food storage study, an early warning system, and a price survey. Given the limited capacity at headquarters, a clearly defined role for the ASAU and established priorities to better manage limited resources are needed and must begin to be elaborated prior to beginning a second phase of the program. OAR/Rwanda and the ASA project director will during the remainder of this project continue to investigate alternatives and prepare recommendations for the PP design team for Phase II to consider.

#### E. Marketing and Price Study and ASAU Pricing Information System

Rwanda has been selected as one of four countries in Africa where an in-depth study of food security issues is to be undertaken with the support of the centrally funded Food Security Project. The current thinking is focused on developing a price and market information system for beans and sorghum as a means of obtaining better information on shortages or oversupply within the difference geographic regions of the country. The logical home for such a study is with ASAU and this activity is expected to last 15-18 months coinciding with the proposed extension of the PACD. It is planned that this project will provide funding to the AID centrally financed MSU Food Security Project to implement this study. Section III. A, below, contains details of this activity.

## F. Preparing a Phase II Project

OAR/R believes that this project should be supported over an extended period beyond the current project to strengthen the analytical base for agricultural policy formulation. The mission plans to prepare the PID this fiscal year and the PP for a fiscal year 1986 authorization. It is clear that the project would benefit from a longer term relationship with a U.S. institution with a strong program in agricultural statistics and economic analysis. Hence, collaboration with a U.S. university, the private sector and/or an international research center will be considered during the PID preparation. The need for continuing collaboration with the U.S. Bureau of Census will also be examined. PDS funds will be requested in FY 84 for the costs of the design of the Phase II project. It is planned that the design team will include representatives of several U.S. universities as well as a food policy specialist from an international research institution.

## II. PROJECT PURPOSE AND OUTPUTS

The project purpose as presented in the original Project Paper is still valid and remains unchanged. The outputs are modified to reflect progress to date.

A. Purpose: to strengthen the capability and performance of the GOR in data collection, processing, analysis, planning and management in the agriculture sector.

This extension is designed to better insure that by the end of the project there will be, (1) an increase in the quantity and quality of information on the agriculture sector and (2) an improved capability for data collection, processing and analysis in the MINAGRI.

B. Project Outputs will continue to focus on institution building activities including training, survey design, execution and analysis. Specifically, the outputs during the proposed eighteen month extension are :

1) Reinforcement of the established and functioning agricultural statistics and analysis unit (ASAU) in the MINAGRI. ASAU's role shall be defined in the organigram of the Ministry of Agriculture, staff appointed, participants named and a system for allocating projects GOR resources defined.

2) Continued training and utilization of the survey and analysis staff at ASAU and in the field to improve the analytical capacity of the ASAU.

3) Further design and refinement of computer programs and data collection procedures.

4) Publication of the National Agricultural Survey.

5) A marketing and price study for beans and sorghum in cooperation with Michigan State University Food Security Project, and the establishment of a pricing information system in the ASAU.

6) Other studies and surveys as the MINAGRI may deem important for policy and planning purposes, such as assisting in data processing and analysis of the Household Budget and Consumption Survey.

7) A system established which enables data users in the public and private sectors to shape ASAU's annual work programs. This system will give priority to data collection and analysis work for which clients are willing to pay and/or otherwise reimburse ASAU.

### III. PLANNED VERSUS REQUIRED INPUTS

OAR/R has completed a financial review of the project, prepared several de earmarking documents and worked with RPMC to correct the MACS reports. Based on these review actions the current financial status of the project is summarized in Table 1. (The report used to prepare this budget is MACS P07A dated 6/12/85).

**Table 1: Summary Financial Status**

(6/30/85)

Category	Obligated <sup>a/</sup>	Earmarked	Committed	Disbursed
1. Technical Asst	1,563,080	1,201,818	1,195,135	935,277
2. Training	359,092	269,769 <sup>b/</sup>	269,769	203,448
3. Commodities	406,360	235,378	215,048	215,048
4. Construction	406,361	135,951	135,951	135,951
5. Other Costs	971,107	845,325 <sup>c/d/</sup>	845,325	714,978
<b>Total</b>	<b>3,706,000</b>	<b>2,688,241</b>	<b>2,661,228</b>	<b>2,204,702</b>

Obligated     \$3,706,000  
 Earmarked    - 2,688,241  
 Available     \$1,017,759 + \$62,000 <sup>d/</sup> = \$1,079,759

a/ RFMC line items do not agree with PP or ProAg. Same total. Line elements to be corrected after approval of PP Supplement. See Annex VI for details.

b/ Includes \$195,000 shown for local training and expended as local costs.

c/ Includes de earmarking for \$2,781 and \$2,530 not yet recorded by RFMC. Also understates local costs as earmarking for in-service training included under training element. See footnote b/. Total local cost approximately \$1,040,000.

d/ \$62,000 double posting to element 5. Memo sent to RFMC to correct.

Table 1 shows that approximately \$1,018,000 is still available for earmarking. In addition, OAR/R has identified a double posting for \$62,000 and once corrected by RFMC these funds will also be available for earmarking. Thus, a total of \$1,080,000 can still be programmed.

The following paragraphs describe activities and project inputs planned during the next 18 months, their cost and where appropriate, the methods of implementation.

A. Technical Assistance

The original project paper planned technical assistance inputs of approximately 270 person-months. To date 110 person-months have been contracted. (See Table 2 below.)

Table 2: Technical Assistance

	Planned	(\$000)	Actual	
Agriculture Economist	5 py	(550)	-	
Survey Manager	5 py	(550)	24 pm	(265)
Administrator	5 py	( 35)	-	
Short-term BUCEN	90 pm	(574)	62 pm	(750)
Data Process Specialist	-		24 pm	(175)
Total	270 pm	(1,709)	110 pm	(1,190)

That the planned level of effort was not totally achieved was the result of delays in finding suitable persons to fill these positions. For example, recruiting the Agriculture Economist took until July 1983, over two years after project authorization. It also became evident that the data processing requirements of the project had been underestimated and it was decided to recruit a data processing expert to assist the ASAU to obtain the survey results. Similar problems were encountered in recruiting the data processing specialist, however, and he was not brought on-board until August 1984. Finally, the administrative assistant position was never filled.

The need for other advisory services have partially been met by a Belgian cooperant who has filled the position of Survey Manager. Some project funding has been provided for his local support but the salary is financed by Belgian aid. Due to the unavailability, during the first two years, of the project agriculture economist, the cooperant did the majority of the analytical work in collaboration with the U.S. Bureau of Census. The agriculture economist, when finally brought on-board, handled many of the tasks planned for the Survey Manager and Administrator. (For this reason Table 2 reflects the services of the Agriculture Economist brought on board in 1983 as services of a Survey Manager.) Despite these corrective actions the evaluation correctly points out that the ASAU still lacks adequate analytical capability. Several actions are planned between now and the end of the project which will address this problem.

The project will continue to provide the services of the Agriculture Economist and the Computer Programmer until March 30, and August 31, 1986, respectively. However, as the work of ASAU will require an increasing number of analytical activities, there is a need for additional long-term analytical assistance. This supplement estimates twelve months of services for a social scientist or economist with experience in data analysis and an additional six months of short-term specialized services. Based on the evaluation recommendations the current economist advisor will concentrate

more on the organizational aspects of producing the 1984 agricultural survey results and the new advisor will assist in the analysis of the data and provide in-service training in data analysis and computer applications. (See Annex III for the job description of the social scientist.)

In addition, the project has recently negotiated a 10 week personal service contract with an economist to assist in the analysis of the full survey data. This provides immediate assistance during the next few months while the full survey results are being analyzed. At the same time a statistician has been hired to teach the equivalent of one semester of applied basic statistics to the ASAU staff. Concurrently with these short-term measures, a competitive recruitment effort is underway to find a qualified social scientist for a one year contract. With these services the ASAU should have sufficient analytical capability until the end of this project.

Finally, two months of short term services are planned for a management study. The evaluation pointed out the need to clarify responsibilities within the Unit and to reduce its operating costs. This consultant will be expected to make recommendations to the Project Director and AID regarding the administration of the project.

Marketing and Price Study and ASAU Pricing Information System: The GOR and MSU plan to execute a survey and research into the pricing and marketing of beans and sorghum and its implications for Rwandan food security. This study, useful also as a component of the Early Warning System, will be undertaken as an activity which was not planned in the pilot and full-scale farm surveys. The evaluation points out that the presence of lack of price information can greatly affect household behaviour with respect to agricultural activities. The AID Collaborative Agreement with Michigan State University (MSU) for applied research to address food security questions Food Security in Africa, DAN-1190-A-00-2069) provides the possibility of an incremental resource to the ASAU. In order to provide a bilateral contribution to this effort it is proposed that the project contribute \$73,700 to the MSU Cooperative Agreement to cover costs of a resident researcher and computer equipment; \$35,000 for in-country support costs for the researcher; and \$100,000 for local survey costs (see Section III.E. below) for interviewers, vehicle operations, etc.. An additional four-wheel drive utility vehicle is needed for the research team (see Section III. C. below).

Detailed budgets and a copy of the Memorandum of Understanding are included in Annex I.

## B. Training

As previously discussed, one problem that the project has encountered is the lack of participants for long-term training. Table 3 presents a summary of planned versus actual training. (Annex II provides details on training to date). Only three persons have been trained in statistics. No training in agricultural economics or survey methodology has been accomplished. In order to strengthen the ASA analytical capabilities, the evaluation recommended that, at a minimum, Masters-level training in economics should be immediately initiated for two persons, including the

Project Director. OAR/R has determined that additional training in data processing and statistics is also a critical need.

Based upon these considerations, a training plan (Table 4) has been proposed. This training is essential for the institutionalization of ASAU. Therefore, concurrent with preparation of the Supplement the MINAGRI was asked to make formal nominations of candidates who can begin English language training this year. Even with an extension of the PACD to March 1987, it is highly unlikely that the participants can return before the new PACD. English language training can require four to six months and experience has shown that approximately two years is needed for completion of Masters-level training. Therefore only partial funding of the training has been included in the budget. (See Table 4, Long-Term Training Plan.)

Table 3: Planned versus Actual Training To Date

<u>Subject Area</u>	<u>Planned</u>	<u>Actual</u> (6/30/85)
Ag. Economist	18 pm	
Survey Manager	12 pm	
Statistician	3 x 12 pm/ea	1 x 16 pm 1 x 12 pm 1 x 14 pm
Systems Analyst	12 pm	
Programmer	12 pm	
Sub-total	90 pm	42 pm
Short-term	5 pm	2 pm
Total Overseas	95 pm	44 pm

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In-service	153 persons for 2 weeks/ea
Total In-Service	306 pw

20

Table 5: Commodities - Planned versus Actual Procurement and Expenditures

<u>Planned</u>	<u>Estim. Cost</u>	<u>Actual</u> (as of 4/85)	<u>Cost</u> (as of 4/85)
7 vehicles	70,000	3 pickup trucks 3 sedans 1 4-wheel-drive 30 motorcycles	117,100
		Total Vehicles	117,100)
21 motorcycles	30,000	155 bicycles	18,600 <sup>a/</sup>
180 sets of survey equipment	40,000	165 sets survey equipment (tapes, compass)	3,500
Computer	75,000	Computer	40,000
2 sets household furniture	30,000	Household furniture	53,700
Office furniture	60,000	Office furniture & equipment	(15,300) <sup>a/</sup>
		calculators	10,800
		1 photocopier	4,600
		miscellaneous	5,700
	<u>\$305,000</u>		<u>\$235,400</u>
Contingency 10%	30,500		
on 15%	89,500		
	<u>\$425,000</u>		

a/ Purchased under local costs.

Most procurement actions for the project have been completed. There remains a need, however, for additional vehicles and the balance of the computer equipment. An amount of \$32,500 will be provided to Michigan State University through the MSU Cooperative Agreement for the purchase of computer hardware and software. As MSU will be collaborating with the ASAU on the price survey as described in Annex 1, OAR/R has determined this to be the most cost-effective procurement method. MSU has experience in procuring data processing equipment and, based on two recent trips to Rwanda, understand the needs of the project.

The remaining procurement includes one four-wheel-drive utility vehicle for the MSU researcher, one replacement sedan and 10 motorcycles. Motorcycle needs were underestimated in the original project paper. The extensive field

work undertaken during the surveys took a heavy toll on the motorcycles. As a result, cycles were replaced almost every year. Thus, rather than the 20 motorcycles originally planned, 41 will have been bought by the end of the project. The costs of replacements have been partially offset by selling the motorcycles with the proceeds used by the project toward purchase of replacements.

The commodity review undertaken in connection with preparation of this Supplement showed the need to increase the value and change the description of commodities in previously approved source-origin waivers.

Table 6: Approved Source-Origin Waivers

<u>Document</u>	<u>Description</u>	<u>\$ Value</u>
Project Paper	7 sedans	
	20 motorcycles	100,000
W-696-13	5 motorcycles	9,000
	-----	-----
Totals	7 sedans	109,000
	25 motorcycles	

Table 7: Actual Vehicle Purchases

	<u>Description</u>	<u>Cost</u>
	1 pickup truck	12,697
	1 sedan	11,259
	1 sedan	
	1 pickup	43,018
	11 motorcycles	
	1 sedan	
	1 pickup	19,060
	1 4-wheel-drive	5,651
	16 motorcycles	25,402
	-----	-----
Totals	3 pickups	\$117,087
	3 sedans	
	1 4-wheel-drive	
	27 motorcycles	

Tables 6 and 7 show that an increase of \$8,000 in the previous waivers is needed. In addition new source-origin waivers are needed for the four-wheel drive, sedan and motorcycles.

Annex V contains a justification for the additional source-origin waivers which are required.

**D. Construction**

The original Project Paper budgeted \$170,000, including contingency and inflation, to construct the ASAU office block. Cost savings were affected because the building was financed jointly with another donor project and facilities are now shared. Total construction costs were \$104,000. Some funds were used, however, to rent office space during construction of the building. Nevertheless, the total expended under this element has only been \$136,000. The balance of \$34,000 will be reprogrammed to other project elements as no further construction is needed. Funds are included under the local costs element to finance installation of wall dividers in some of the larger offices to provide space for the MSU researcher and survey team.

**E. Local Costs**

The project paper budget for local cost seriously underestimated the requirements to field the survey team. Expenditures for every line item have exceeded the budgeted amounts and additional funds will be needed to support the MSU/ASAU price survey. Table 8 summarizes the planned versus local cost expenditures.

**Table 8: Planned vs. Actual Local Costs (U.S.\$)**

	<u>Planned</u>	<u>Actual</u>
Vehicle Operations	40,000	129,500
Survey Operations	60,000	365,000
Office supplies & equipment		(256,000)
Utilities		(14,000)
Office furnishings		(95,000)
Rwandan Survey Staff	224,000	371,000
(Salaries)		(291,500)
(per diem)		(79,500)
Rent	12,000	51,500
In-Service Training	34,000	95,000
Miscellaneous	-	28,000
Sub-Total	<u>370,000</u>	
Contingency and Inflation	106,000	
TOTAL	<u>476,000</u>	<u>1,040,000</u>

\* Expenditures per ASAU records; average exchange rate US\$ 1 00 = 100 FRW.

The Project Paper contains no back-up calculations for individual line items but it is evident that the original budget underestimated expenses for local costs in virtually all categories. Calculations implicit in the PP can be compared with what one would normally budget. Vehicle fuel, for example, for seven vehicles averaging 35,000 km per year over five years, at eight liters per 100 kms, comes to \$63,700. If maintenance costs are added as well as the costs of operating 21 motorcycles, a figure of \$100,000 to \$120,000 is more reasonable than the \$40,000 budgetted.

There were also considerably unforeseen expenses. The PP budgetted for one year rental of an office building but it was necessary to rent a building for over three years. Finally, the survey required considerably more training of local staff, day to day supervision, and personnel than was originally foreseen.

The ASAU, the Mission and RFMC have different methods for keeping records of advances and liquidations, doing postings and preparing financial reports. Records of these three different bookkeeping entities have not been fully reconciled. The following steps have been taken to improve management of local costs.

- several visits were made by OAR personnel to RFMC to liquidate outstanding AID advances;
- a temporary fully qualified Rwandan accountant was hired to bring the ASAU books up to date;
- an American CPA has been contracted to provide periodic inspection and training services to the ASAU and other projects; and
- a mission review of the MAC/s P04 Commitment Liquidation report and a subsequent TDY to RFMC corrected over one hundred posting errors.

Even with these steps, there remain errors to correct. In Table 8 above, the total of actual local costs are estimated at \$1,040,000. This is based on the ASAU records which we believe are the most accurate calculation of costs. Table 1, Summary Financial Status, shows only \$845,325 earmarked for local costs; however, the training element includes earmarking of an additional \$194,998 for in-service training or \$1,040,323, the total shown in Table 8. Accounting for exchange rate variations, OAR believes its reconciliation of the RFMC and ASAU to be accurate. Additional corrections will be made during the next few months to account for the remaining small difference between the RFMC and ASAU records.

One Hundred Thousand Dollars has been budgeted for the local costs support of the MSU/ASA price survey. (See Annex I for details.) Table 9 represents the budget estimate of \$300,000 for local costs from July 1985 to March 1987. An additional \$50,000 has been budgeted for survey printing costs. Therefore, in order to complete the project activities and undertake the additional activity of the price survey, an additional \$450,000 for local costs is required.

**Table 9: Projected Local Costs Expenses**  
**7/85 - 3/87**  
**(\$000)**

	7/85-9/85	10/85/9/85	10/85-3/87	TOTAL
<b>Vehicle Operations</b>				
fuel	3,000	18,000	9,000	30,000
repairs and spares	3,000	20,000	11,000	34,000
insurance	500	3,000	1,800	5,300
Sub-total	6,500	41,000	21,800	69,300
<b>Survey Operations</b>				
office supplies	9,000	36,000	18,000	63,000
utilities	200	1,400	700	2,300
furnishings	2,000	8,000	2,000	12,000
equipment	200	400	300	900
office maintenance	1,000	5,000	2,500	8,500
miscellaneous	200	2,500	1,200	3,900
Sub-total	12,600	53,300	24,700	90,600
<b>Rwandan Staff</b>				
salaries for contract employees	3,000	25,000	13,000	41,000
benefits	700	3,800	2,000	6,500
per diem	2,000	20,000	10,000	32,000
Sub-total	5,700	48,800	25,000	79,500
<b>Rent</b>	2,200	13,200	6,600	22,000
Sub-total	2,200	13,200	6,600	22,000
<b>In-Service Training</b>	0	5,000	5,000	10,000
Sub-total	0	5,000	5,000	10,000
<b>Total All Costs</b>	27,000	161,300	83,100	271,400
<b>10% Contingency</b>	2,700	16,100	8,300	27,100
	=====	=====	=====	=====
	29,700	177,400	91,400	298,500

ROUNDED GRAND TOTAL \$300,000

25

Obviously, the high costs of administering these surveys is an important issue for the ASAU. These costs need to be minimized and savings effected. The services to be provided by the CPA will be one effort in this regard. The management consultant will also provide advise in this area. The design team for the Phase II project will have to examine project recurrent cost implications carefully.

#### IV. REQUIRED ACTIONS

Table 10, "Remaining Funding Requirements" summarizes the planned costs based on the activities described in this Supplement. Table 11 presents the proposed reallocation of funds among project elements. Approval of this PP Supplement, therefore, entails approval of the planned expenditures in Table 10 and the new project element total presented in Table 11. Other required actions are summarized below.

A. Technical Assistance: Concurrent with approval of this PP amendment the services of the agricultural economist will be extended by nine months; recruitment of an analyst for twelve months is underway; a PIO/T for amendment of the MSU Cooperative Agreement is being issued; PIO/Ts for support cost of the advisors will be issued; and a statistician has already been engaged to provide on-the-job training.

B. Training: The Minister of Agriculture has been requested to nominate three persons for M.A. level training in agriculture economics and statistics/computer applications. It is planned that language courses will be arranged at the English Teaching Institute beginning in August of this year. Two participants will leave in January and the third in the fall of 1986.

Table 10: Remaining Funding Requirements

<u>PROJECT ELEMENT/DESCRIPTION</u>	<u>AMOUNT</u>
<b>1. <u>Technical Assistance</u></b>	
Price Survey with MSU a/	76,700
--MSU Researcher Support Costs	(35,000)
--Cooperative Agreement	(41,700)
Craig July 85 to March 86	75,000
Contractor Support Costs	75,000
Short-term	
Other (4 to 6 mos)	60,000
Ag Economist (12 mos)	125,000
Admin/Mgt Review(2 mos)	30,000
Sub-total	441,700
<b>2. <u>Training</u></b>	
Ag Economics 2 MA degrees (1/2 funding)	46,800
English training	15,000
Statistics/Data Processing	41,200
Sub-total	103,000
<b>3. <u>Commodities</u></b>	
1 4-wheel-drive b/	15,000
10 motorcycles at 1/2 of 1,500	10,000
1 sedan	9,000
Computers and software	32,500
Sub-total	66,500
<b>4. <u>Local Costs</u></b>	
July 1985 - March 1987	300,000
Publication costs	50,000
Price Survey costs	100,000
Sub-total	450,000
TOTAL	\$1,061,200
AVAILABLE	\$1,080,000
CONTINGENCY	\$ 18,800

a/ Associated transport cost budgeted under Commodities; associated local costs budgeted under Local Costs.

b/ Required for Price Survey.

**Table 11: Proposed Reallocation of Funds Among Project Elements**

	<u>Planned</u>	<u>Actual</u>	<u>Additional</u>	<u>Total</u>	<u>Rounded</u>
		as of 6/85	6/85-3/87		Amounts
1. Technical Asst.	2,375,000	1,201,818	441,700	1,643,518	1,645,000
2. Training	260,000	269,769	103,000	372,769	370,000
3. Commodities	425,000	235,378	66,500	301,878	305,000
4. Construction	170,000	135,951	0	135,951	136,000
5. Other Costs	476,000	783,325 *	450,000	1,233,325	1,250,000
<b>TOTAL</b>	<b>3,706,000</b>	<b>2,626,241</b>	<b>1,061,200</b>	<b>3,687,441</b>	<b>3,706,000</b>
Contingency			18,559	18,559	-
		2,626,241	1,079,759	3,706,000	3,706,000

\* \$845,325 less \$62,000 double-posting equals \$783,325. See Table 1.

C. Commodities: Local procurement of vehicles will be initiated upon approval of this Supplement and the source-origin waiver contained in Annex V. Procurement of the remaining computer equipment will be accomplished by issuing a P10/T to amend the MSU Cooperative Agreement for the technical services described above and for the computer equipment.

D. Local Costs and Revision of Project Agreement: Subsequent to approval of this Supplement a Project Implementation Letter will be prepared which will earmark local costs between July 1985 and March 1987. This same PIL will also reallocate subtotals among project elements as presented in Table 11.

E. Extension of PACD: This supplement requests extension of the Project Assistance Completion Date from September 30, 1985 to March 30, 1987 for a total extension of eighteen months. The purpose of this extension is described in Part I.B., "Rationale for PP Supplement" and will permit completion of project activities as described in this Supplement.

**MARKETING AND PRICE STUDY AND ASAU PRICING INFORMATION SYSTEM**

**Exhibit 1: Budget**

**Exhibit 2: Fact Sheet on Food Security in Africa**

**Exhibit 3: Terms of Reference**

**Budget MSU/ASA Price Survey**

Exhibit 1

**A. MSU Contribution**

- 2 trips for negotiation and research development	22,000
- Senior staff consultancy 6 trips x 2 weeks/each	48,000
- On-campus support 5 mos.	35,000
- Researcher and report preparation	18,000

(123,000) a/

**B. ASA Contribution to MSU Cooperative Agreement**

**1. Researcher**

- Air fare 1 RT Michigan-Rwanda-Michigan	5,000
- Air freight 900 lbs x \$7/lb	6,300
- Per diem \$30 days x \$79/day	2,400
- Salary 15 mos. x \$1,300/mo.	19,500
- Housing 15 mos. x \$1,000/mo.	
- Guard service 15 mos. x \$250/mo.	
- Utilities 15 mos. x \$200/mo.	
- Furniture	
- Office expenses	,500
- Communications	2,000
- Miscellaneous	5,000

Sub-total 41,700 b/

**2. Researcher Housing Costs**

- Housing	15,000
- Guard Utilities	5,000
- Furniture	15,000

Sub-total 35,000

**3. Research Staff and Expenses (Local Costs)**

- Counterparts 15 mos. x \$400/mo.	6,000
- 2 supervisors 15 mos. x \$200/mo.	6,000
- 12 enumerators 15 mos. x \$150/mo.	27,000
- 4 key punchers 7 mos. x \$150/mo.	4,200
- Part time secretary 7 mos. x \$200/mo.	1,400
- Per diem 4 x 120 days x \$40/day	19,200
12 x 60 days x \$15/day	10,800
- 1 4WD utility vehicle	(15,000) c/
- 1 driver 15 mos. x \$150/mo.	2,250
- POL 15 mos. x \$500/mo.	7,500
- Vehicle repair & Insurance 15 mos. x \$600/mo.	9,000
- 4 sets office furniture x \$700/each	2,800
- Office supplies 15 mos. x \$300/mo.	4,500
- Reports & questionnaire preparation	2,000
- Supervisor and enumerator training	1,500

Sub-total \$104,150 d/

Rounded to \$100,000

GRAND TOTAL FOR ASA \$176,700

a/ MSU contribution.

b/ Sub-total budgeted under TA. (See Table 10)

c/ Non-add. Budgeted under commodities. (See Table 10)

d/ Sub-total budgeted under local costs. (See Table 10)

30

**FACT SHEET**  
**ON**  
**Food Security In Africa Cooperative Agreement**

1. Cooperating Institutions:  
AID/Bureau of Science and Technology: Contact Person, Don Ander.  
AID/Africa Bureau: Contact Person, Curt Reintsma, AFR/TR/ARD  
USAID Field Mission  
Host Country Institutions  
Department of Agricultural Economics, MSU
2. Funding Levels:
  - a. Core
    1. AID/Bureau of Technology - \$900,000
    2. AID/Africa Bureau - \$1,000,000
  - b. Mission Add-Ons - 2 million anticipated
    1. USAID/Southern Africa Regional Program - \$400,000
3. MSU Faculty Involvement: Carl Eicher and Mike Weber (Co-directors), Rick Bernsten, Eric Crawford, Harold Riley, Jim Shaffer, John Staatz and others, to be identified as research topics and opportunities arise.
4. MSU Research Assistants: Stephan Goetz, Thomas Jayne, Amalia Rinaldi, Dave Rohrbach and Phil Steffen, and others to be identified as needs and opportunities arise.
5. Applied Research Themes:
  - a. See knowledge gaps identified in research proposal.
  - b. Tentative list of priority research areas.
    1. Managing food aid, food imports and foreign exchange to achieve food security goals.
    2. Planning and prioritizing research requirements to achieve food security goals.
    3. The interaction of technological change, institutional reforms and macro-level policy in overcoming food production and marketing constraints.
    4. Data and analysis needs for food security planning.
6. Operationalizing the Applied Research:
  - a. Two comprehensive country studies
    1. Zimbabwe comprehensive study being negotiated
    2. Second country to be identified during year one of implementation
  - b. Focused Studies in 6 to 8 countries:
    1. See October 1984 Progress Report on list of potential countries in Africa. Other countries in Africa and possibly in Latin America and/or Asia may be included for comparative purposes.
7. Networking:
  - a. Begin first network in Eastern and Southern Africa in collaboration with the University of Zimbabwe.
8. Publications
  - a. Continue to publish reports and working papers in MSU International Development Paper Series
  - b. Publish in-country specific reports and working papers in collaboration with host institutions in countries where applied research is undertaken.
  - c. Other assorted research and policy outlets.

TERMS OF REFERENCE FOR THE RWANDA STUDY

MEMORANDUM OF AGREEMENT

between

THE RWANDA AGRICULTURAL SURVEY AND ANALYSIS SERVICE

and

THE DEPARTMENT OF AGRICULTURAL ECONOMICS

MICHIGAN STATE UNIVERSITY

and

THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

June 14, 1985

37

## I. General Framework of the Study

### A. Africa-Wide Research

The applied research described herein should be viewed in the global context of a USAID/Michigan State University Cooperative Research Agreement entitled "Food Security in Africa," (approved in September, 1984). The overall goal of this Cooperative Agreement is to produce, through applied research, new knowledge that will assist African governments and policy makers in devising ways of assuring improved food security. For purposes of this research, food security is defined as "the ability of a country or region to assure, on a continuous long-term basis, that its food system provides the total population access to a timely, reliable, and nutritionally adequate supply of food."

Specifically, Michigan State University researchers will collaborate with African researchers to consider selected food security problems or themes in some 6 to 8 African countries, each chosen to reflect general and particular conditions of different African sub-regions (the Sahel, Austral, East and Southern Africa.) The principal research themes to be addressed in the Cooperative Agreement include:

1. Managing food aid, food imports and foreign exchange to achieve food security goals;
2. Planning and prioritizing research requirements to achieve food security goals.
3. The interaction of technological change, institutional reforms and micro-level policy in overcoming food production and marketing constraints;
4. Data and analysis needs for food security planning.

In two cases more comprehensive country studies will be carried out, focusing more broadly on the four themes listed above. Other country cases will focus more directly on one or more of the themes.

In addition to conducting collaborative research with African counterparts, the Cooperative Agreement has networking and publication objectives, both aimed at creating more opportunities for African researchers to share food security research results, policy experiences and study methodologies. At least two networks will be established in cooperation with African institutions. The first network is in Eastern and Southern Africa and will be jointly developed and managed by the University of Zimbabwe and MSU. A second network is under discussion and will focus more on West and Central Africa.

Country level applied research reports and working papers will be published in collaboration with specific host-country institutions where research is conducted. Research and policy analysis results of more general interest to other African researchers will be co-published by host-country institutions and MSU in the MSU International Development Paper Series.

## B. Research in Rwanda

The applied research described herein for Rwanda is considered one of the focused studies, and concentrates on specific dimensions of themes 3 and 4 mentioned above. Details of this research are presented in the following sections of these terms of reference. The Rwanda study will be guided by three general operating guidelines: (1) collaborative working relationships; (2) integration with other studies rather than duplication; and (3) support of on-going institution building activities. The experience of faculty in the Department of Agricultural Economics at Michigan State University is that these operating guidelines contribute to long-term success in the Universities' knowledge building and training mission in Developing Countries. The following brief discussion of each of these will help set the framework for the specific applied research in Rwanda.

1. Collaborative Working Relationships. Research will be conceptualized and implemented in direct collaboration with Rwandan analysts and policy makers in the Agricultural Survey and Analysis Service (SESA). The MSU in-country researcher will become a participating SESA research team member, and all short-term MSU participants will take an active role, rather than simply serving as occasional advisors. Resources will be made available to hire two Rwandan researchers to work as members of the SESA research team, in addition to support staff to assist in data collection and analysis. The Rwandan and MSU researchers will work together on all phases -from conceptualization to final analysis and policy dialogue-.

2. Problem Focus. Starting in January of 1985, MSU and USAID/Washington researchers held discussion with Rwandan officials and analysts to identify food security problems and issues of mutual interest. Rwanda has a Food Strategy in place, and many national, as well as international institutions are working to implement various action programs within the overall context of this plan. MINAGRI has developed and charged SESA with important data collection and analysis functions to assist in providing needed information to accomplish goals of the Food Strategy. The research topic selected is intended to relate to one important set of policy relevant questions within the overall Food Strategy. The basic objective is to contribute to the on-going efforts of SESA which supports the many different agencies working on various dimensions of the Rwanda Food Strategy.

3. Capacity Building. While working hand-in-hand with SESA to conduct this specific research, the objective is to assist SESA in building on existing and complementary data sets which will be valuable for future analysis. The emphasis will be on organizing and utilizing to the maximum existing data before designing new data collection activities. By hiring on

a temporary basis (15 months) two Rwandan researchers as team members and helping them to actively participate in all phases of the research, we will be creating, through the process of accumulating in-service experience, a larger pool of potential long-term staff analysts for SRSA and/or other Rwandan agencies.

### C. Contingency Planning

Our experience dictates the importance of following the above operating guidelines in order to contribute most effectively to long-term problem solving capacity in any given country or setting. Yet it also has shown that this is a more difficult and risky way to conduct research because considerable emphasis is placed on coordinating with on-going data collection and analysis efforts. If anticipated data, analysis or other forms of cooperation are not forthcoming, the research scope may have to be adjusted. Likewise, if analysis of existing and/or forthcoming data shows that it is not acceptable for the purpose at hand, new choices must be made to either collect one's own data, or to modify the intended research. For this reason it is important to indicate that the research described below will require considerable and rapid success in following these three operating guidelines in order to examine all questions and/or hypotheses desired. Recognizing the risks involved, we have set research targets that allow a full consideration of relevant dimensions of the problems of interest. If all questions cannot be answered in this single undertaking, it is hoped that the list will serve as a useful guide to future research efforts.

## II. General Topic

The research will focus on the relationship between prices and food security. It will analyze the effect of existing and alternative price formation processes on market performance and food security, including the study of data and information needs for effective food security policy analysis. Emphasis will be on storable food commodities (beans, sorghum, maize, etc.) although selected dimensions of the study will examine the relationship between these crops and others.

## III. Objectives

The two major objectives of this research are:

1. To develop information and analytical approaches which will contribute to understanding of important policy questions related to prices and food security in Rwanda.
2. To contribute to the development of a framework for future food security policy analysis in Rwanda and the specification of anticipated data requirements.

We will approach these objectives through three interrelated sets of research questions.

#### IV. Research Questions/Hypotheses To Be Considered

##### A. Relationship of Prices to Farm Family Production, Consumption and Marketing Decisions

1. What are the strengths and weaknesses of existing data sets describing seasonal prices, prices between markets, annual prices, and production? Can the differences in these data be reconciled? How do they compare to independent empirical checks?

2. Do farmers take market considerations into account in planting decisions, or just market incidental surpluses? Are actual or expected prices most important?

3. Will a change in the price of a single crop change total output, or merely alter cropping patterns?

4. Will a change in agriculture's terms of trade result in a change in total production?

5. What are the effects of farm family strategies for storage and sale of marketed surplus on seasonal prices?

6. What are the maximum profit strategies for storage and sale by farm families? How do these affect their cash flow?

7. Do farmers understand how government market policies work/how they are intended to work?

##### B. Evaluation of Market Performance

1. How do prices change within seasons? What are the seasonal flows of commodities? What are merchant profits from provision of storage? How long do merchants store products?

2. How are prices different between markets? Do these differentials reflect differences in transport and assembly costs, or are there profits to be made through arbitrage?

3. Are merchants price takers or price makers? How much do they influence farm family production and marketing decisions? How strong is the relationship between merchants and farm families? Do merchants assist farm households with credit, technical advice, consultations on future market behavior, or verbal contracts for future production?

4. Are merchants aware of market conditions and prices in various parts of the country? What facilities do they have available for storage and transport?

5. What are the characteristics of farm families most at risk nutritionally, in terms of location, crop mixture, size of farm, and off-farm income? Similarly, what are the characteristics of farm families least at risk?

6. How much of farm family consumption is obtained through monetized and non-monetized transactions?

### C. Major Public Policy Programs

1. What are actual and intended parastatal strategies for timing of food aid acquisition, local purchases, and sales? How have these affected prices, farmer income, and subsequent production decisions? Do data reflect the effect of food aid releases on prices and next season production? How have the parastatal activities evolved over time?

2. What are parastatal activities in equalizing prices between markets? Is equalization a net profit or loss activity?

3. How effective are GHENARWA's forward pricing arrangements in coordinating supply and demand? How might they be strengthened and/or adapted for use in other areas? How do indicative pricing, and purchasing and sales strategies affect supply and demand coordination?

4. What are the functions of the extension service? Does it facilitate the flow of information to the farmer, the market, and the government? Are there role conflicts in agents' activities? How do these affect performance?

5. Can existing monthly price series be used as an early warning system? Do price movements accurately reflect future scarcities/surpluses as farmers and merchants formulate their expectations of yields and buy/sell accordingly? Are there low cost ways to improve the accuracy and speed of information delivery to policy makers? Would a new weekly price reporting system generated by the Agriculture Survey and Analysis Project be cost-effective?

6. How do local taxes, export and import taxes, and subsidies affect storable food commodities?

### III. Tentative Plan of Work

#### A. Analysis of Existing Data Sets

1. Analysis of Existing Price Series. It is intended that the assembly of the various farm commodity price series be accomplished as soon as possible and entered into SESA's micro computer data bank. Consistency checks will be made. Existing programs will be used for standard seasonal and spatial analysis. The more complex analysis related to the use of price as an early warning indicator of crop shortfall and the relationship of current to next year prices and production will be integrated with data from our surveys.

2. Analysis of Selected Portions of MINIPLAN's Rural Household Budget/Expenditures Survey Data Set. The existence of this unique data set (HBES) presents a problem in specifying the plan of work. Indications are that it is a rich set of data which can contribute to analysis central to this study as well as the proposed study of small enterprise development and other important areas of policy. Discussions with INSEK in Paris and local representatives indicate that the data can be made available but that a substantial investment of talent will be required to prepare this very detailed data for analysis and to supervise the analysis. We would propose to participate in the process assuming adequate resources are available. Of special interest would be the identification of the characteristics of farm households at risk in respect to food availability and farm household producing the largest marketed surplus as well as analysis dealing with the relationship among production, consumption, purchases and sales.

3. SESA Agricultural Census Data. As SESA progresses with analysis of the national agricultural census, relevant results will be integrated into this study. To the extent possible, data and analysis from the pilot phase of the census will be matched with results from the HBES in order to gain a more complete understanding of household production, stocking, purchasing, sales and consumption behavior.

#### B. Tentative List of Planned Surveys and Original Data Collection Activities.

1. Consultations with farm management, farming systems and agricultural technology experts in Rwanda. The purpose is to identify existing experience and knowledge of the role of prices in farmer decision making, chronic food security problems, obtain informed judgments of supply response potential, major production constraints, forthcoming technology and related problems.

2. Survey of Approximately 30 Extension Agents. Purposes include identifying current role of agents in collecting and extending price and other market and crop prospects information, identifying their technical recommendations to farmers, their assessment of production response

potential and farmer production, storage and marketing strategies. Also possibly include in-depth discussions of agent knowledge of trends in crop mixture over different weather years, knowledge of whether farmers plant more root crops now and other trends in cropping - fallow, and marsh cultivation as weather and/or other factors change.

3. Survey of Prices in Markets. After reviewing current commodity price collection methodology it may be desirable to survey prices in several markets as a benchmark for assessing existing price series.

4. Add-On to Continuous Farm Household Survey currently in progress. Purposes include obtaining: on-farm prices (and assessing potential for obtaining such price information) for selected commodities; information on selected purchases and sales; a data set which would allow correlation of purchases, sales, production decisions and prices. For example, when do farm families sell and repurchase the same commodity? To what extent are farm households providing storage and assembly functions. A series of questions like the following could be used to determine farmers' knowledge of prices:

- Was any sorghum sold this past week?  
If so     How much? \_\_\_\_\_  
           At what price? \_\_\_\_\_
  
- Were any beans sold this past week?  
If so     How much? \_\_\_\_\_  
           At what price? \_\_\_\_\_
  
- If no purchase or sale of beans, do you know the price of beans at the nearest market? YES - NO  
If yes, what is the price? \_\_\_\_\_
  
- If no purchase or sale of sorghum, do you know the price of beans at the nearest market? YES - NO  
If yes, what is the price? \_\_\_\_\_
  
- Other questions related to price information sources.

5. A One-Time Add-On to On-Going Farm Household Survey. The purpose is to obtain additional information about sources and accuracy of farmer perception of price, and the relationship of prices to their production, storage and marketing. Questions would be developed to try to see if prices change, do farmers increase total production, or just change their crop mix. Under what circumstances would farmer store more/less between seasons? What factors other than price affect marketing decisions? Surplus? Cash flow? Do farmers sell and then buy them back later in the season? If so, is it for cash flow reasons, or storability? If farmers purchase beans late in the storage period, is it because they want beans that are easier to cook?

6. In-Depth Farm Household Survey. This would be a small stratified sample with interviews conducted by the researchers and perhaps advanced students and interviewer supervisors. The purposes include obtaining in-depth information about short and longer-term farm food security strategies, estimates of production potential, constraints and especially the probable relationships between price and other possible incentives and production, storage, selling and purchasing of selected foods.

7. Merchant Survey. This survey will be of narrow scope since the ERC is planning a major marketing study. The emphasis will be on information not included in the ERC study which are central to the understanding of pricing and the effectiveness of prices in allocating commodities through time and across space.

**VI. A Tentative List of Topics for Working Papers and Reports**

- A. A Comparison of Agricultural Commodity Price Series in Rwanda.
- B. Patterns of Seasonal Prices of Selected Agricultural Commodities in Rwanda.
- C. Differences in Agricultural Commodity Prices Among Markets in Rwanda.
- D. The Role of Rwandan Extension Agents in Collecting and Extending Information About Crop Prospects, Prices, Markets and Farm Commodity Policies.
- E. A Description of Selected Policies Which Influence Farm Product Prices in Rwanda.
- F. The Potential for Using Reported Farm Commodity Prices As an Indicator of the Next Season Crop Size and Prices. Possible Uses As an Early Warning Indicator of a Crop Shortfall.
- G. A Brief Case Study of Direct Food Aid, Prices and Incentives in Rwanda: Implications for Feasibility and Design of Food Aid Distribution.
- H. Characteristics of Rwandan Households with Low Food Consumption and Those with The Largest Marketed Surplus with Implications for Food Security.
- I. Assessment of Potential for Farm Commodity Supply Response in Rwanda: A Summary of Conclusions from Interviews with Farming Systems and Agricultural Production Researchers
- J. Farm Household Strategies of Risk Management for Family Food Security in Selected Areas of Rwanda.

40

- K. Information from Rwandan Farmers About Potential Supply Responses to Economic Incentives.
- L. Some Implications of Economic Research for Programs of Public Stocks Management and Price Stabilization in Rwanda.
- M. Observations on Market Performance in the Food Grain Sub-Sector of Rwanda.
- N. Some Preliminary Observations on Prices, Comparative Advantages, Specialization, Interregional and International Trade, Off-Farm Employment, Food Security and the Potential Transition to a More Productive Agricultural, Manufacturer and Service Economy in Rwanda.
- P. Prices and Food Security in Rwanda: A Summary Report.

## VII. Personnel

### A. SKSA

1. Director of SKSA will be the overall study coordinator.
2. Other existing SKSA researchers, to the extent of their available time and interest, will participate in selected research dimensions.
3. A minimum of two additional Rwandan researchers will be hired to work in cooperation with the SESA and MSU staff.
4. To the extent necessary, additional data collection, data processing and supervisory staff will be hired.

### B. MSU

1. One long-term researcher will be in residence in Rwanda for a minimum of 15-18 months (September 85-November 86).
2. Other MSU campus-based researchers and computer support staff will be available for periodic short-term participation in Rwanda.

## VIII. Implementation Plan

1985

- June 18 -Completion of Terms of Reference and Tentative Plan of Work.
- July 1 -Hire first research associate.

VII

- July 2 -Initiate assembly of already collected price and production data series from MINIPLAN, MINAGRI, The National Bank of Rwanda, OPROVIA.
- Prepare data for entry into SESA micro computer price data bank.
  - Obtain careful description of the method of collecting each price series and careful description of what each series represents.
  - Plot representative segments of each price series for first check of reasonableness of data.
- August 1 -Hire second research associate.
- Initiate collection of documents related to prices, market performance, price policy, food assistance, food security and potential agricultural supply response in Rwanda.
  - Collect material for and start draft of working paper describing policies and programs designed to influence agricultural prices in Rwanda.
  - Do a pretest of procedure for obtaining purchase, sales and price data from the continuous production survey (early warning). Try out first with several farm families, then with samples of 10 with several regular interviewers.
  - Obtain a list of agricultural extension agents classified by regions to be used to select sample of extension agents.
- July-Aug. -Initiate analysis of selected portions of the Household Budget/Expenditures survey data if arrangements can be made.
- Sept. 10 -MSU in-country Research Associate arrives.
- Sept. 15 -Complete review of pretest of the procedure for obtaining purchase, sales and price data from continuous survey.
- Sept 15-oct 15
- Train interviewers for collection of purchase, sales and price data.
  - Interview Farming Systems representative.
  - Interview approximately 30 extension agents.
  - Initiate collection of purchase, sales and price data. Plan 12 month collection. (These activities all involve travel to countryside and can be dovetailed. All research associates are involved in team effort.

-Visit sample of farm when interviewers first obtain purchase, sales and price data.

-Run the first tabulation of the price series data in such a fashion as to make comparisons of comparable series. Determine usability of the data and select series for analysis. Prepare brief working paper.

Oct 16-Nov 15

-Assuming price series data are determined to be adequate, use the seasonal price program from MSU to do standard seasonal price analysis. Prepare working paper.

-Do a run of first survey results of purchases, sales and prices. Check for reasonableness. Make adjustments in procedures as needed.

Prepare first draft of working paper based upon interviews of extension agents and farming systems researchers.

-Design in-depth farm household survey. Consider the question of sample being drawn from continuing production survey in order to relate to the broader data set.

Nov 15-Dec 15

-Train enumerators and initiate in-depth farmer household survey.

-Do analysis of price series to compare prices among markets. Prepare preliminary write up. Identify needed data on costs of moving products between markets. Check to see if EEC study will have such data.

-Complete seasonal price working paper.

-Complete paper from FSR-Extension agent survey.

Dec 16-Jan 15

-Design and field test one-time add-on survey of farm households in the continuous production-early warning survey.

-Initiate entry and testing of data runs from in-depth farm household survey.

-Write up topic # E.

-Do analysis for topic # F.

1966

Jan 16-Feb 15

-Review progress. Revise work plan. If appropriate timing with other opinion surveys do one-time add-on survey.

-Do analysis from in-depth farm household survey.

Feb 16-March 15

-Design and initiate merchant survey.

-Data processing of one-time survey.

March 15-April 15

-Tabulation of one-time survey.

-Preliminary work on topics F and G.

Apr 16-May 15

-Review progress. Revise work plan. Initiate analysis of additional topic working paper.

May 16-June 15

-Complete major tabulations from a

-Do half year summary of data from continuous survey.

June 16-Sept 15

-Complete tabulations of one-time surveys.

-Outline and plan data presentation for working papers.

Sept 16-Oct 15

-Develop final plans for analysis and writing of remaining working papers.

Oct 16-Nov 15

-Complete tabulation of continuing farm household survey.

-Write.

Nov 16-Dec 15

-Complete working papers.

44

MEMORANDUM OF AGREEMENT

Between

THE RWANDA AGRICULTURAL SURVEY AND ANALYSIS SERVICE

And

THE DEPARTMENT OF AGRICULTURAL ECONOMICS

MICHIGAN STATE UNIVERSITY

And

THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

I. PREAMBLE

The Government of the Republic of Rwanda (GOR) as part of its efforts to improve the food security of the nation, has adopted a national food strategy aimed at increasing domestic food production and improving the distribution systems for agricultural products and inputs. The Rwandan Ministry of Agriculture, Livestock and Forestry, in support of the goals of the Food Strategy has established an Agricultural Survey and Analysis Service through a collaborative project with the United States Agency for International Development (USAID).

USAID also concerned about the need to assure the nutritional and economic well-being of people throughout Africa, has entered into a Cooperative Agreement, entitled "Food Security in Africa", with the Department of Agricultural Economics of Michigan State University (MSU). The general goal of the Cooperative Agreement is to carry out applied research that will aid African governments in devising ways of assuring improved food security. Priority research themes include the following: (See Annex 1.)

- a. Managing food aid, food imports and foreign exchange to achieve food security goals;
- b. Planning and prioritizing research requirements to achieve food security goals;
- c. The interaction of technological change, institutional reforms and micro-level policy in overcoming food production and marketing constraints;
- d. Data and analysis needs for food security planning.

## II. GENERAL PROVISIONS

1. Given that the Rwanda Agricultural Survey and Analysis (SKSA) is the Rwandan entity in charge of providing relevant and accurate agricultural data and analysis which can be utilized by the GOR in making more effective use of its limited natural resources, both through better planning and through improved ability to anticipate problems and crises of food deficiencies;

2. Given that the Department of Agricultural Economics of Michigan State University (MSU) is the entity in charge of implementing a Cooperative Agreement (No. DAN-1190-A-00-4092-00) between the United States Agency for International Development (Bureau of Science and Technology, and Africa Bureau) and Michigan State University entitled "Food Security in Africa." Supplemental funding for work in Rwanda under this Cooperative Agreement will also be provided by the Office of the USAID Representative in Rwanda (OAR/R);

3. The Government of the Republic of Rwanda, USAID and MSU by this Memorandum of Agreement agree that the following persons will be designated as representatives of their respective agencies:

- a. The Secretary General of the Ministry of Agriculture, Livestock and Forestry of Rwanda will be the designated official representative of the GOR, and the Director of the Agricultural Survey and Analysis Service, will serve as the program coordinator for the GOR in this Memorandum of Agreement.
- b. Either one or both of the Co-Directors of the "Food Security in Africa" Cooperative Agreement at Michigan State University will serve as the designated representatives of MSU.
- c. The "Food Security in Africa" Cooperative Agreement Project Manager will serve as the designated representative of USAID in Washington, D.C.
- d. The Agricultural Development Officer is the designated representative of USAID in Rwanda.

## III. OBJECTIVES

4. The present agreement entered into by the undersigned is designed to launch a collaborative program of applied research with the goal of determining ways of improving food security in Rwanda and to provide a framework for accomplishing the program. Research will more specifically focus on themes c. and d. identified in the Preamble. A more detailed description of the Rwanda research program is found in the term of reference presented in appendix 2.

46

5. Additional applied research components mutually agreed to and for which funds are made available to MSU and/or SKSA will by subsequent amendments be made part of this Memorandum of Agreement. Each subsequent amendment will contain a plan of work and project budget to cover expenditures for research expenses in Rwanda, and will be submitted for review and approval by all parties to this Memorandum of Agreement. The overall project completion date will be extended, if necessary, through the process of amendments.

#### IV. OPERATIONAL PLAN

6. MSU through the "Food Security in Africa" Cooperative Agreement with USAID, shall provide the financing necessary to cover the following costs:

- a. Salaries of long-term MSU researcher(s) in residence in Rwanda;
- b. Salaries of short-term MSU researcher(s) and computer support staff working on the project in Rwanda;
- c. International travel costs for all MSU researchers;
- d. Salaries of MSU on-campus direct support faculty and administrative staff;
- e. Access to research results and policy dialogue experiences from other African countries participating in the "Food Security in Africa" Cooperative Agreement;
- f. Development and participation in a food security research and policy network among African researchers.

7. USAID in Rwanda, through the Agricultural Survey and Analysis Project with the Ministry of Agriculture, Livestock and Forestry shall make available the following:

- a. Financing of the research component in Rwanda, including selected equipment and vehicle purchases;
- b. Salary and allowances for mutually agreed upon temporary Rwandan participants in the research, and incentive allowances for regular GOR personnel.
- c. Duty-free purchasing (with OAR/R financing) of the project vehicle and licensing of the vehicle;
- d. Duty-free purchasing of a computer and accessories.

8. SESA shall make available to the project

a. A program coordinator;

b. Personnel management services for mutually agreed upon research and support staff;

c. Office space and utilities;

9. All equipment and cars purchased with funds from OAR/R for in-country research purposes will become the property and legal responsibility of SESA. The MSU in-country researcher and any Rwandan counterpart staff will have priority use of all equipment and vehicles purchased for the use of the project.

10. SESA will act as the employer and disbursing agent to pay the salaries of local personnel specifically designated for research to be conducted under this Memorandum of Agreement. Candidates for the various positions will be jointly identified, tested, interviewed and selected by the Director of SESA and the MSU in-country researcher.

11. The Director of SESA and the MSU in-country researcher will carry the day-to-day responsibility of assigning and directing the duties of the local project personnel, and will monitor and assess at intervals the performance and quality of their work. At the initiative of the MSU in-country researcher, and in agreement with the Director of SESA, the latter will make and implement decisions relative to promotion, sanctions, and termination of local project personnel.

12. The OAR/R will transfer funds to SESA in an amount needed to maintain a positive balance for the purpose of paying salaries and allowances of approved local personnel, and research expenses.

13. It is understood that OAR/R will provide SESA with the necessary resources to pay all local personnel costs (including salaries, allowances, taxes, social security, etc. It is also understood that neither OAR/R nor MSU is acting as the employer of local project personnel and therefore will in no way carry any legal responsibilities relative to payments of benefits, withholding of taxes, etc., from salary distribution. Also, neither OAR/R nor MSU will be legally responsible for accidents or disabilities arising from on-the-job or off-the-job activities of local project personnel, nor from the use of any project equipment or vehicles purchased for the project.

#### V. DATA AND PUBLICATIONS

14. All data collected in the execution of this agreement shall be retained at SESA. MSU, USAID/Washington, and OAR/R, if they so desire, will be provided with an identical set of all supporting documentation and

1/8

data on computer file, tape, cards or alternative formats. All parties have complete access to data collected during the conduct of on-going research. Upon termination of the applied research agreed upon under item 4, each of the parties to this Memorandum of Agreement may release data to outside individuals and institutions only after a period of 12 months has elapsed. Any subsequent research agreed to under item 5 is subject to the same restriction for 12 months beyond completion. Alternative distribution and publication arrangements are possible through mutual agreement of all parties.

15. The following procedures will be followed in producing publications from the applied research:

- a. All publications shall give due credit to the substantive contribution of all parties, as well as to the financial support of USAID in Washington and Rwanda, unless such credit is not desired by a contributing party.
- b. All of the parties to this agreement are free to publish working papers and other forms of preliminary working publications without prior review by other parties. None of the parties to this agreement shall publish any final manuscripts or refereed journal articles referring to information obtained or developed pursuant to the agreement without giving thirty (30) days notice to the other parties of its intention to publish, together with a copy of the proposed publication.
- c. All parties reserve the right to disclaim endorsement or disassociate themselves from publication of such data obtained under the terms of the agreement. In the event any party exercises its rights to disclaim endorsement or disassociate itself from the publication, the party publishing such data or article shall be notified in writing, which shall contain an appropriate statement of disclaimer or disassociation which shall be inserted in the publication. The notification of disclaimer must be received within thirty (30) days after notification of intended publication.

#### VI. FINAL PROVISIONS

16. This agreement can be modified in writing on request by any of the parties on mutual agreement. Any dispute related to the interpretation or application of the present agreement shall be settled by means of negotiation. The present agreement shall come into effect upon its signature. It shall remain valid until August 30, 1987 or unless previously terminated or extended.

17. This Memorandum of Agreement is prepared in both English and French. In the event of ambiguity or conflict between the two versions, the English language version will control.

Authorized Signatures

For GOR/SESA:

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Dr. Dismas Nsengiyaremye  
Secretary General,  
Ministry of Agriculture,  
Livestock and Forestry

-----  
Serge Rwamasirabo  
Director, Agricultural Survey  
and Analysis Service - SESA

For USAID/Washington:

-----  
Don Anderson  
Project Manager, Food Security  
in Africa Cooperative Agreement

For MSU:

-----  
Carl K. Eicher or Michael T. Weber  
Project Co-Directors

-----  
MSU In-Country Researcher

For OAR/k

-----  
Michael Fuchs-Carsch  
Agricultural Development Officer  
OAR/R.

50

## TRAINING PROVIDED TO DATE

<u>P10/P</u>	<u>Amount</u>	<u>Names</u>	<u>Objective</u>	<u>Place</u>	<u>Length</u>	<u>ETD/RTA</u>
20053	3,000	Murekezi Rwamasirabo	Early Warning Study Tour	Nairobi	2 weeks	11/9-23/84
10008	23,800	Sehene Nyamurangwa	Statistics	BUCEN	14 mos.	10/27/80-5/7/82 10/27/80-12/28/81
20062	1,500	Rwamasirabo	Comp. in Agr. Seminar	Salzburg	3 weeks	4/18-5/11/85
10034	12,000	Fabiola Gatanguliya Rwamasirabo Buvakure	Ag. Statistics Seminar	CENACOF/ Kinshasa	3 weeks	1/19/83-2/16/83
10045	42,000	Mulingo	Ag. Sampling & Statistics	ISPC/W	16 mos.	9/83-12/84

TERMS OF REFERENCE

SOCIAL SCIENTIST/POLICY ANALYST

Agricultural Survey and Analysis Project

**OBJECTIVE:** To help strengthen the analytical capability of the Agricultural Survey and Analysis Unit in the Ministry of Agriculture, Livestock and Forestry and to provide on-the-job training to Rwandan staff. An important sub-objective is to assist in the integration of various data sets available on the agricultural/rural sector of Rwanda including data from the Household Budget and Consumption Survey of the Ministry of Plan.

**SCOPE OF WORK:** To achieve this objective, the consultant will undertake the following duties:

1. assist staff of the ASAU in the remaining analytical tasks prior to final publication of the results of the recently completed agricultural sample census;
2. assist ASAU staff in the analysis of the information and farmer responses to the Early Warning/Crop Forecasting questionnaire routinely administered in the field;
3. take the lead in developing a practical methodology for developing estimates of production costs by major food crops marketed;
4. assist in the determination of future agricultural surveys needed to better inform agricultural policy makers and planners;
5. assist staff in the Direction General of Statistics in the Ministry of Plan in the analysis of the household budget and consumption data. This will be accomplished by developing a work program for Rwandan analysts and the assignment of priority analytical tasks; and
6. advise on the nature and type of future AID assistance to the Ministry of Agriculture and the Ministry of Plan to strengthen analytical capability for policy formulation.

Although a 2-4 year contract period is envisaged, funding is now available for a 12-month contract. OAR/Rwanda is now engaged in developing a successor activity to the ASAP and the extension to the initial 12 months contract will be financed from that activity.

The candidate should have a Ph.D. in a field in the social sciences, preferably agricultural economics and have a minimum of three years experience doing similar work overseas. S/he should have French proficiency at the PSI 3 level in reading and speaking.

**Proposal for the Acquisition of Remaining Micro-Computers for SESA**

The Agriculture Survey and Analysis Unit of the Ministry of Agriculture purchased two IBM XT micro-computers in early 1985. The computers are primarily used for statistical analysis of the data from the 1983-84 National Agricultural Survey and for data processing of smaller scale surveys undertaken since the completion of the national survey. The project was evaluated in February 1985 and the evaluation team recommended increasing the computing capabilities of the project. Therefore, \$32,500 has been allocated on project budget for computer equipment in the Project Paper Supplement.

The evaluation report also recommended that the project should try to exploit the data collected in the 1982-1983 rural household budget and consumption survey conducted by the Ministry of Plan. Several other AID projects are also very interested in this data and recent recommendations propose extensive analysis of the budget and consumption survey data by the project. The project has provided system design and programming support to this survey since November 1984.

The analysis of the budget/consumption survey data will proceed at the same time as that of the national agricultural survey. These data are more complex and will require considerable computing resources. (Estimates of volume of data to be processed will be available soon.) The acquisition of an IBM AT micro-computer and sophisticated data management and analysis software is recommended for processing this survey. The acquisition of an Apple Macintosh micro computer is recommended to facilitate the preparation of the publications of the National Agricultural Survey (and eventually the budget and consumption survey). The Macintosh will also be used to prepare questionnaires for new surveys and for routine word processing. Recommended configurations for these two micro-computers are attached.

This equipment will be purchased by MSU under their Cooperative Agreement with AID. MSU has been asked to investigate several questions and to make recommendations regarding the equipment. These questions include the following:

First for the IBM AT, verify that all software will run on the AT; evaluate the different compilers available and recommend their choice (if possible, the compilers should be compatible with each other); determine if the K-text word processing package available with Knowledgeman is acceptable for text editing of programs and simple word processing and if it is not, recommend a suitable alternative; determine if the K-Mouse module of Knowledgeman is useful and determine if it is feasible to use the hard disk/tape backup system with the AT and with the XT we already have some sort of hardware switch is probably available). Finally, does the MSU computer staff know of any program which can read foreign format diskettes (CP/M, Apple, etc.) on the IBM XT. This is not an absolute necessity but would be useful.

The choice of the Epson printer and the SYSGEN hard disk/tape backup system is dictated by the possibility of having a local maintenance contract.

The COBOL compiler recommended for the AT is the one needed in Kigali immediately. It will be a great service, if you can arrange to buy it and ship it to Kigali as fast as possible.

Following is a tentative list of equipment.

Recommended IBM PC AT configuration for the household budget survey.

IBM PC AT(R) 512K 20 MB hard disk \$5,795.

Intel 80286 microprocessor  
8086 compatible mode  
64K ROM  
512K RAM  
1.2 MB floppy disk drive  
20 MB fixed disk drive  
Serial/parallel interface

Additional hardware required 3,650.  
(Price estimated as 63% of base unit)

PC/AT Keyboard (French-AZERTY)  
Monochrome display/printer adapter  
Monochrome display  
DOS 3.1 (French)  
80287 math co-processor  
Additional PC/AT 20 MB hard disk  
Epson 100 printer and cable

Hercules monochrome graphics card 400.  
(Price estimated)

Sysgen XI hard disk/tape backup 3,295.  
20 MB hard disk (possible extension to 100 MB)  
60 MB tape streamer

Sub-total computer hardware \$13,140.

Note all components must be 220V AC 50 cycle.

Also need a 220V AC 50 cycle power conditioning or uninterruptible power supply system.

Software requirement for the IBM AT.  
(all prices estimated)

Knowledge Man (K-Graph, K-Paint, K-Test(?), K-Mouse(?))	800.
Statistics package (SPSS or SYSTAT 2)	700.
Microfocus Level II Cobol compiler (with FORMS-2 and Animator)	1,500.
MDBS III data base management system	5,000.
FORTHAN compiler	400.
Pascal compiler	400.
Micro assembler	200.

Software sub-total \$9,000.

Sub-total for IBM AT \$18,000.

Recommended Macintosh configuration for report preparation system

Apple Macintosh \$4,0000.

- 512k RAM
- French keyboard (AZERTY)
- American keyboard
- Numeric keypad
- External disk drive
- Apple Imagewriter printer (8") & accessories
- Operating system + MACWRITE, MACPAINT  
(OS in French and English)

Software

Microsoft Word	\$195.00
Microsoft Multiplan	195.00
Microsoft Chart	\$125.00

PC to Mac and back communications package ??

Sub-total \$4,515.00

GRAND TOTAL \$35,655  
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## Justification for Source-Origin Waiver

**PROBLEM:** Your approval is requested for a source-origin waiver from AID Geographic Code 000 (U.S. only) to Code 935 (Special Free World) and a waiver of the requirement of Section 636(i) of the Foreign Assistance Act of 1961 which prohibits the purchase of non-U.S. manufactured motor vehicles and motorcycles.

(A) Cooperating Country : Rwanda

(B) Authorizing Document : Project Authorization dated 03/31/81

(C) Project : Agriculture Survey and Analysis (ASA)

(D) Project Number : 696-0115

(E) Nature of Funding : Grant

(F) Description of Commodities : twelve 125-175 cc motorcycles  
1 sedan  
1 4WD utility vehicle

(G) Approximate Value : \$34,000

(H) Probable Origin : Japan, France or Germany

(I) Probable Source : Rwanda

**BACKGROUND:**

Additional vehicles are required to support the remaining project activities. The sedan and motorcycles are needed as replacement vehicles, including replacement of the Peugeot 305 sedan bought in 1981 which has over 100,000 km. In addition 10 replacement motorcycles are needed to support the remaining survey work particularly the price survey being conducted by Michigan State University. In addition, this waiver provides authority for two additional motorcycles to provide retroactive authority for two motorcycles which were purchased under the dollar authority of previous waivers. Finally, one additional four-wheel-drive utility vehicle is needed for the research leader for the price survey. The costs of these vehicles has been budgeted in the PP Supplement.

**DISCUSSION:** Under Africa Bureau Delegation of Authority 140, revised June 9, 1982, authority to waive source and origin requirements has been delegated to the AID Representative subject to REDSO Director concurrence and consultation with the Regional Legal Advisor (RLA) and the Regional Commodity Management Officer (RCMO).

**SOURCE AND ORIGIN WAIVER:** Under Handbook 1B, Chapter 5B4a(2), a waiver may be granted if the required commodity, in this case vehicles which can be adequately repaired and serviced locally, is not available from countries or areas included in the authorized Geographic Code.

Experience with U.S. manufactured vehicles in Rwanda (a few of which are owned by the U.S. Embassy) indicates that frequent breakdowns can prevent operation of a U.S. manufactured vehicles for weeks and even months while spare parts are ordered from the United States. Even if the full range of spare parts required to maintain the vehicles are available, competent repair facilities outside the U.S. Embassy are non-existent. The situation is exacerbated as vehicles age and are subject to poor maintenance. On the other hand, certain European and Japanese vehicle dealerships and many rural garages carry spare parts and maintain acceptable repair facilities for European and Japanese manufactured models. In addition, they have competent mechanics who have been trained in the factories of the respective manufacturers.

The motorcycles which are needed must have a relatively small horsepower but with a capacity to travel on rough terrain.

The availability of reliable vehicles is critical to the success of this project. The survey work done by the Ag Survey and Analysis Unit is conducted at specified at Specified points in the cropping calendar. Therefore, vehicles must be reliable and serviceable in Rwandan rural areas to allow project implementation to proceed in a timely manner.

**PRIMARY JUSTIFICATION:** The vehicles and motorcycles covered by this waiver request, which can be serviced and repaired locally, are essential to the effective implementation of the project whereas service capabilities and spare parts support are not available for U.S. and other Code 941 manufactured vehicles. Based on this it can be determined that the required commodities are not available from the authorized Geographic Code nor from Code 941.

A waiver of the requirements of Section 636(i) of the Foreign Assistance Act is also requested. This legislation prohibits A.I.D. from purchasing motor vehicles unless such vehicles are manufactured in the United States. It does provide, however, that the U.S. only requirement may be waived where "special circumstances exist" which justify procurement outside of the U.S. Chapter 4C2d(1)(b) of Handbook 1B provides that such special circumstances exist for the procurement of passenger vehicles where there is "a present or projected lack of adequate service facilities and supply of spare parts for U.S.-manufactured vehicles."

**RECOMMENDATION:** Based on the foregoing it is recommended that (1) you waive the source and origin requirements set forth in AID Handbook 1, Supplement B to allow purchase of twelve motorcycles, one sedan and one 4WD utility vehicle of an approximate value of \$34,000; (2) you conclude that special circumstances exist which justify the waiver of Section 636(i) requirement that only U.S. manufactured vehicles be procured; and (3) you certify that exclusion of procurement from Free World Countries other than the cooperating country and countries included in Code 941 would seriously impede attainment of U.S. foreign policy objectives and the objectives of the foreign assistance program.