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# USAID Cameroon Office of Agricultural and Rural Development



AGRICULTURAL MANAGEMENT AND PLANNING  
PROJECT No. 631-0008

## FORMATIVE EVALUATION REPORT

PREPARED BY

JOHN FLISINGER  
(EVALUATION TEAM LEADER)

LYLE CALVIN

JOSEPH SNYDER

JANUARY/FEBRUARY  
1984



# United Republic of Cameroon

DATE: February 28, 1984

*C. J. F.*  
FROM: Mr. C. John Fliginger, Evaluation Team Leader, Ag. Mgmt & Planning  
SUBJ: Evaluation Report - Ag. Management and Planning Project, 631-0008  
TO: Mr. Samuel Scott, PDE

The attached Evaluation Report is submitted in accordance with Contract No. 631-0008-S-00-4006-00. I have reviewed the contents of the report with Cameroonian members of the evaluation team and, have had review meetings in USAID/Cameroon and the Ministry of Agriculture.

I would like to take this opportunity to thank you and your colleagues in the Project Development and Evaluation Division as well as the Agriculture and Rural Development Division. I would especially like to thank Mr. Marcel Ngue whose help and guidance were of extreme importance in completing this evaluation. I would also like to express great appreciation for the efforts of Mr. Abraham Eyong who did the typing of the report. His high level of competence, patience and good humor made it a real pleasure to work with him.

When the Report is duplicated, I would appreciate receiving a copy, as would Dr. Lyle Calvin and Joe Snyder.

Thank you.

cc: Mr. W. Litwiler  
Mr. L. Calvin  
Mr. J. Snyder  
Mr. M. Ngue  
Mr. A. Eyong

EVALUATION REPORT  
AGRICULTURE MANAGEMENT AND PLANNING  
(631-0008)

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## I. EXECUTIVE SUMMARY

The project began slowly especially on the statistics side as the result of three primary factors, staffing of the senior statistician position, staffing of the Statistics Division and, greatest of all, a delay in the decision on the Agricultural Census vs annual surveys. The economics side of the project started more rapidly and a number of economic studies were completed early in the project.

The statistics component of the project made extremely rapid progress after the decision was made regarding the Census of Agriculture. During 1983 a sampling frame, sample design, and enumerator and supervisor manuals were completed as were questionnaires and survey procedures. The basic elements for conducting the 1984 Census of Agriculture and subsequent annual surveys, are in place. Tabulation of the census data and subsequent analysis of that data is threatened by an inadequate data processing capability and/or plan. Quick resolution of this problem is imperative to maintain schedules for tabulation and publication of the data.

Timely availability of statistical data will provide the basis for expanded and more in-depth economic analysis which would serve as a basis for the Sixth Plan. Subsector studies leading to a full sector review should be achieved in sufficient time to serve in the preparation of the Sixth Plan.

The statistics capability also provides a capability for gathering specialized data during the annual surveys and on special occasions. This offers a significant resource for conducting special studies in the years following the census. The subsector studies, sector review and the Sixth Plan offer a basis from which to develop a long-term plan and establish priorities for conduct of future special studies.

Elements needed for achieving these goals are: an extension of the project to June 30, 1987, continuation of technical assistance, development of in-house data processing capabilities, training, increased funding on the part of both USAID and the GRC, stabilized counterpart staff within DEP and strong planning and organizational support from both USAID and DEP.

Contribution of these elements will result in a high probability of success in achieving the project goals.

## II. EVALUATION METHODOLOGY

### A. Evaluation Team Composition

This Project Evaluation Report was prepared by an evaluation team composed of three contract consultants, one representative from the Ministry of Planning and Industry (MINPI), two representatives from the Direction of Studies and Projects (DEP), served primarily as recourse persons and did one representative from USAID/Yaounde. These persons were:

Mr. C. John Fliginger	Consultant, Agric.Econ./Stat., Team Leader
Mr. Tchana Mesak	MINPI
Dr. Lyle Calvin	Dean of Graduate School, Professor of Statistics, Oregon State University
Mr. Pierre Kouang	Chief, Division of Statistics, DEP
Mr. Clobert Tchatat	Chief, Division of Studies, DEP
Mr. Joe Snyder	Asst. Director, Academic Computing, Computer Center, Oregon State University
Mr. Marcel Ngue	Project Officer, USAID/Yaounde

#### B. Timing of the Evaluation

This evaluation was conducted during the months of January and February of 1983, and is considered to be the mid-Project evaluation called for in the Project Paper, (PP) and the Project Agreement, (ProAg).

Mr. Fliginger was in Cameroon during the period January 5 through March 1, 1984; Dr. Calvin January 14 through February 4, 1984 and Mr. Snyder January 26 through February 14, 1984.

#### C. Evaluation Objectives

The evaluation objectives were established by USAID/Yaounde and were set forth in the scopes of work for the evaluators. These scopes of work are contained in Annex I of this report.

#### D. Evaluation Methodology

The evaluation was carried out as a team effort, in which representatives of the MINPI, the DEP, USAID/Yaounde and the Contractor evaluators reviewed project documents, conducted interviews and made on-site observations. The Contractor evaluators made intensive reviews of the USAID/Yaounde project files as well as the files held by project personnel. Evaluators participated in review meetings with DEP staff, project personnel, IBRD advisors, and FAC advisors in both Yaounde and in the field.

A judgemental approach was used to determine the impact of the project upon the institutional development of the DEP, however a more in depth

technical approach was used in evaluating the statistical outputs of the project.

The contractor evaluators drafted the evaluation report which was then reviewed by other evaluators, project personnel and AID staff. Judgements in the report were based on the past experience in world wide applications of economics and statistics programs of a similar nature and on the technical disciplines involved.

See Annex II for a list of persons consulted and interviewed.

### III. PROJECT GOAL AND PURPOSE

#### A. Project Goal:

1. As stated in the Log Frame of the Project Paper:  
"To execute rural development of project which benefits the majority of rural people."
2. As stated in the Project Agreement:  
"To improve Cameroon's ability to execute agricultural and rural development projects which benefit the rural poor."

#### B. Project Purpose:

1. As stated in Log Frame of the Project Paper:  
"To institutionalize a fully functioning planning and statistics unit within the Ministry of Agriculture to plan, design, implement, monitor and evaluate projects in the rural sector."
2. As stated in the Project Agreement:  
"To further develop an agriculture economics and planning unit with the capability to plan, design, implement and evaluate agricultural and rural development projects."

#### C. Discussion and Recommendations:

##### 1. Discussion:

Both the project goal and the project purpose appear to be inconsistent with the project inputs, outputs and description. The goal and purpose emphasize projects, whereas the other sections of the PP and the ProAg emphasize the strengthening of the economic planning capacity of the MinAg with lesser emphasis placed on projects. The ProAg states "a comprehensive agriculture sector analysis will document all segments of the agriculture sector inter alia marketing, production, special projects, land use potential and price policy." It also states that analysis will "provide the basis for planning and policy papers", and "provide a rational framework for deciding between alternative means of resource allocation within the sector".

The project outputs and description are more oriented to economic analysis than they are to projects. The important development of an improved statistical system is obviously not for statistics alone but rather to provide a sound basis for economic analysis that can feed into and support sector planning and policy decision making.

2. Recommendations:

That the Project Goal be changed to the following:

"To assist in improving Cameroon's ability to develop and execute agricultural and rural development programs which benefit the rural majority".

That the Project Purpose be changed to the following:

"To strengthen and institutionalize fully functioning statistics and economic study units, capable of providing sound economic analysis which the MinAg can rely on for planning and policy purposes".

IV. PROJECT INPUTS

A. USAID Inputs:

USAID inputs to the project included technical assistance, project evaluation, administrative assistant, participant training, commodities and other local costs, according to the ProAg signed Aug. 31, 1979. The 3 amendments did not change the range of inputs to be included.

1. Technical Assistance:

A Participating Agency Service Agreement (PASA) was signed between USAID and the US Department of Agriculture in November 1979. The PASA was to provide an Agricultural Economist/Sector Planner, (Team Leader) for 60 months, a Senior Statistician/Survey Designer for 48 months, an Agricultural Economist/Marketing Analyst for 48 months, a survey statistician for 48 months, as well as approximately 30 person months of short-term consultants.

The first advisor to arrive in country was the Field Survey statistician who arrived in April, 1980. The Senior Economist/Team Leader arrived in October 1980, the Marketing Economist arrived in November 1980 and the Senior Sampling Statistician arrived in February, 1982.

Staffing of the project in terms of the mix of disciplines set forth in the IF and ProAg was appropriate. All advisors assigned to the project carried adequate technical qualifications for performing the duties required.

Timing of advisor arrivals did contribute significantly to a slow start in project activities, especially on the statistics side. The survey statistician arrived within seven months of the signing of the ProAg. He

was able to order equipment, test survey procedures and experiment with an area sampling frame. However, he was unable to develop exact sampling frame construction specifications and sampling procedures without the sampling statistician who didn't arrive until February 1982, nearly two and one half years after the ProAg was signed.

Arrival of the economists, although over a year after the ProAg was signed, is not considered to have caused significant delay in achieving project goals, especially in view of the delays in the data system which would serve as the data source for much of their analysis.

The inclusion of an administrative assistant to support project activities is appropriate in that it should remove a great deal of administrative burden from the advisors, thus allowing them to concentrate on their technical activities. An administrative assistant had been employed by the project for 42 months as of December 31, 1983.

Table No. I demonstrates the status of the project as of December 31, 1983 regarding the inputs of person months to the project under the AID contribution. It shows that as of December 31, 1983, (chronologically 75% of the way through the project), about 63% of the PP and ProAg projected person months had been utilized for resident advisors, 38% for short term advisors, and 70% for the administrative assistant.

Recommendations:

Section V of the evaluation contains recommendations regarding continued technical assistance input.

Table I: Summary of Technical Assistance Inputs  
Through Dec. 31, 1983

Summary of Technical Assistance, Ag Mgt. Planning Proj. (631-0008)

A. <u>Resident</u>	<u>Project Paper</u>	<u>ProAg</u>	<u>Actual</u> as of 12-31-83
	<u>Person Months</u>	<u>Person Months</u>	<u>Person Months</u>
1. Ag. Economist/Planner	60	60	39
2. Ag. Economist/Marketing	60	48	38
3. Senior Statistician	36	60	22
4. Survey Statistician	<u>60</u>	<u>48</u>	<u>38</u>
Total Person Months Resident	216	216	137
B. Short Term Consultants			
1. Statistics	5	- )	( 4 <sup>1</sup> / <sub>2</sub>
2. Information System	2	- )	(
3. Sub Sector Studies	10	-	5
4. Mid-Project Eval.	2	-	
5. Ongoing eval.	<u>6</u>	<u>-</u>	<u>-</u>
Total Person Months Consultants	25		9 <sup>1</sup> / <sub>2</sub>
C. Admin Assistant	60	60	42

2. Participant Training:

The PP and the ProAg provided for the advanced degree training of one participant in each of the following 7 disciplines: Production Economist, Rural Sociologist, Ag/Econ planner, Ag Statistics/Systems Analyst, Survey Design Statistician, Agronomist, and Marketing Specialist.

The 1982 evaluation reported that the original training plan was rejected by MINAGRI, and a revised training plan was developed in 1982. The revision reduces the MS level training to the following 5 disciplines: MS Ag. Econ. Development and Finance, MS Ag. Econ. Development Planning, MS Ag. Econ. Quantitative Method, MS Ag. Econ. Agricultural Statistics and an MS Ag. Econ. Computer Sciences. A total of 15 short-term programs were recommended.

Table no II demonstrates the actual training carried out under the project and the timing of such training. Two participants departed in 1980, five in 1981, three in 1982, and six in 1983.

Departures of participants for training in statistics was programmed from June 1980 through March of 1983. All of these participants but two will have returned by the time the census begins and two will return about the time the census tabulation is in full swing, and near the current PACD.

Departures for the economics participants were delayed until March 1983, and are not expected to return until March 1985, also near the PACD.

Overall the revised Training Plan appears to be appropriate. It is unfortunate that such a large number of MS candidates (5) left at such a late date in the project life that they won't return until about the time of the PACD. The recommendation to extend the project until June 1987, if accepted, will provide the returned participants the opportunity to work with technical assistance advisors for a period of two years. This would enhance their degrees greatly.

**Recommendations:**

See Sections V for comments and recommendations relative to training in specific disciplines.

Table II: Summary of Training Activities<sup>1/</sup>

A. Long Term

1. Economics:	Degree:	Dep.	Ret.
MANN Dieudonné	MS Ag Econ, U. Georgia	3-83	3-85
ESSOMBA Simon	MS Ag Econ, U. Kent	3-83	3-85
FOKWA Samuel	MS Ag Econ, W. Texas State	3-83	3-85
EHODE Ekanga	Non-Deg. Rural Economy, U. Florida	1-82	12-83
2. Statistics			
FOMY Christian)	(Project provided funds for 4-5 months )		
YANGA, Thomas )	( study at GWU to complete ISPC Ag Stat)		
)	( Program, M.S. Special Studies )		
TCHOMTE Vincent	MS Comp. Sc., N Mex	3-83	3-85
NSINKEU Dominique	MS Ag. Stat., S. Ill	3-83	3-85
POUANSI, Paul P.	MS Ag. Stat., Census B	5-81	6-83
AGOUM Annabel	MS Comp Sc., Census B	5-81	6-83

B. Short Term

Pierre KOUANG	USDA SRS Microcomputer	July-Aug 1982	
Pierre KOUANG	Statistics, Census Bureau	June 9-Aug 1 1980	
Pascal Kangne	" "	" "	
Joseph PENDIA	Ag. Stat Course, N Mexico	May-Aug. 81	
Emmanuel Tozé	" "	" "	
Jean Betkev Ketchapa	" "	" "	
Zacherie Olé	African Dev. Mgmt. U. Pittsburg	9 wk course	
Joseph Nguenkeng,	USDA Ag Proj Planning and Analysis	Sept- Nov 82	
Joseph Kamga,	English Training, VIP visit USDA' TVA, AID	Oct-Nov 83	

C. In-Country Training

1. Basic Stat and Data Presentation, Feb 82, 30 Central & Prov. Staff
2. 11 Enumerator Training Schools 1 wk in length ave 35/classprogram

D. Third Country Training

1. An observation trip to Tunisia for observing statistical systems developed in that country.

<sup>1</sup> Source Project Training Officer

### 3. Commodities

Acquisition of commodities has generally followed the plan outlined in the PP and ProAg, the only notable exception being the computers which were not anticipated in either the PP or the ProAg. Receiving reports in the Project Officer file appear to be complete and up to date.

Regarding appropriateness of the commodities, it appears that most conformed to the needs of the project and were appropriate for use in the country. The two questionable procurements are those of vehicles and computers. The very high cost of maintenance and difficulty of repair for american vehicles raises some question about the appropriateness of those vehicles for use in Cameroon. Depreciation of american vehicles for reliable use in the bush appears to be around 3 years. We were unable to obtain accepted depreciation schedules or comparable maintenance costs for vehicles of foreign manufacture.

Appropriateness of the computers is discussed in greater detail in the Data Processing section of this evaluation. However, there is serious question about the ability of the system to expand and tabulate the basic census data within the time frame established. There are additional questions regarding the ability to carry out statistical and economic analysis which will necessarily follow.

Annex III lists the PIO/C's issued and the delivery dates of the commodities ordered. Long lead times for delivery of commodities caused some inconvenience and delay in project implementation of the statistics component of the project. However is not considered to be a major factor.

#### Recommendation:

Most commodities for most project activities have been secured at this time. However, if a continuation of the project is agreed upon it is recommended that the following be included:

- a. An upgraded computer
- b. Replacement vehicles for advisor bush travel.

#### B. GRC Inputs

##### 1. Personnel:

Staffing of the Statistics Service, which was raised to a Division in Feb. 1983, was slow in developing. However as of this evaluation it appears that the Division is adequately staffed to carry out the Ag Census and the annual surveys, with the exception of computer programmers.

The basic assumption was that programmers were not needed since a statistical analysis package was developed for summarization of data. This assumption has proven false in the sense that programmers are required for modification of the programs, and for the more in-depth analysis of the data, to be conducted after initial output tables are prepared.

The Direction of Studies and Projects was reorganized in 1983. The evaluation team was not able to obtain staffing patterns for each year of the project, but was provided with current staffing levels. See Table III.

The Division of Statistics is by far the largest and most fully staffed within DEP. Lack of sufficient employees in the earlier years of the project slowed development of the sampling frame to some extent. However in late 1982 and early 1983 staff began to grow and very rapid pace was achieved on frame construction. Currently the Divisions appears to have adequate staff which is, for the time being, stable.

The Division of Studies is the second largest of the DEP, and its development of the DEP, and its development has been much slower. A new Chief for the Division has recently been appointed. The Division of Studies appears to be under-staffed for the volume of work to be done. There is a great deal of reactionary approach in this Division, which is normal. However, the pressures of reacting on such a small staff hinders a long-term stable approach to analysis and the anticipation of issues to be addressed. Only one economist is employed by the Division of Studies, although a number of agricultural engineers have had training in economics. Three economists currently being trained in the US will help to some extent but they will not return until March 1985. Turnover of personnel in the Division of Studies is reported to be high but may stabilize with the appointment of the new Chief.

The Division of Projects is the third largest division but carries the largest contingent of economists. The Division is currently without a Chief. The Division is responsible for monitoring and evaluation of agricultural projects. It does not seem to be under the pressures that is characteristic of the Div. of Studies, but apparently is understaffed for proper monitoring and managing of projects.

## 2. Office Space:

Considerable problems regarding office space occurred during the early stages of the project and during sample frame construction, but the statistics Division currently has minimally adequate space, as does the Division of Studies and the Division of Projects.

## 3. Special Account:

The PP and the ProAg identify a special account to be set up by the MinAg for purposes of providing office supplies and furniture, gasoline, vehicle maintenance and per diem for implementation of project activities. This was later determined to be illegal and the MinAg was not able to set up the account.

By mutual agreement USAID and the MinAg shared responsibility and absorbed the cost of these items in their budgets and within the project itself. USAID is providing for vehicle maintenance for 14 enumerator and 4 advisor vehicles as well as operational costs for advisor vehicles. USAID

also provided for office space for a period of 13 months. The MinAg is currently providing for office space, supplies, and furniture, in addition to gasoline and per diem for DEP staff.

DEP has purchased 22 vehicles for the Statistics Division. These are above and beyond what was programmed in the PP and the ProAg, and expresses to some degree the high interest in the project by the MinAg.

Recommendations:

- a. Continued building and training of staff in the Divisions of Studies and Projects should continue.
- b. Develop long range plans for analysis which anticipate problem areas so as to reduce the chaos of reactionary responses. (It is noted that reactionary analysis cannot be avoided but can be significantly reduced by proper planning and systematic analysis.)
- c. Adequate office space, both qualitatively and quantitatively, should be anticipated and addressed to accomodate increasing staff.
- d. In view of the high cost of maintenance and operation of US manufactured vehicles, DEP should begin depreciating vehicles and budgeting for purchase of more suitable replacement vehicles, especially for the Statistical Division.

Table III: STAFFING PATTERN:  
DIRECTION OF STUDIES AND PROJECTS

a) Division of Statistics

1. Central level:

3 statisticians

4 agricultural engineers

4 ingenieurs des travaux agricoles

2 agricultural technicians

9 agents (typists, drivers, bookkeepers, night guards)

2. Field level:

7 provincial chiefs of service of statistics (Census supervisors)

44 departmental chiefs of section (Census controllers)

15 chiefs of departments (playing same role as Census controllers)

155 permanent enumerators

108 temporary enumerators

NB: With the creation of new administrative units, the staff will include 3 additional provincial chiefs of service of statistics, 5 departmental chiefs of section, 16 temporary enumerators.

b. Division of Studies

6 agricultural engineers

1 economist

2 food technicians (engineers)

1 soil scientist

1 jurist

c. Division of Projects

6 economists

2 agricultural engineers

1 accountant

1 Ingenieur des Travaux

NB: DEP Director and his Deputy are agricultural engineers.

C. Financial Analysis

Neither time nor authority permitted the evaluation team to make a line by line fiscal audit of the project. Therefore this section contains a general overview of the financial status of the project as of Dec. 31. 1983.

1. USAID Contribution:

The original ProAg projected life of project funding to be \$3,250,000. Actual obligation through the ProAg and three amendments is \$3,783,000. The following table shows the status of project funding as of Dec. 31, 1983.

Table IV: Status of USAID Project Funding  
Dec. 31, 1983  
(US Dollars)

	Obligated (ProAg + 3 Amend)	Earmarked	Unear- marked	Pipeline 12-31-83
Technical Asst.	1,840,000	1,866,000	25,000	275,000
Training	548,000	497,000	51,000	154,000
Commodities	1,195,000	1,130,000	65,000	94,000
Support Services	130,000	98,000	32,000	1,000
Other	70,000	60,000	10,000	3,000
Total	<u>3,783,000</u>	<u>3,651,000</u>	<u>132,000</u>	<u>527,000</u>

Source: USAID/Yaounde Controller

Funds earmarked for technical assistance at \$1,866,000 of the total earmarked, is considerably less than the \$2,200,000 projected in the project agreement, even if support services are included. Training at \$497,000 is running somewhat higher than the \$320,000 projected in the ProAg, and commodities at \$1,130,000 are nearly double the ProAg projection of \$605,000.

Based on the current PACD, the project was 75% completed chronologically, on Dec 31, 1983. On the same date approximately 92% of the obligated funds had been earmarked. By line item, 101% was earmarked for technical assistance, 91% for training, 95% for commodities, 75% for support services and 86% for other.

A financial analysis by the AKD office conducted in Sept 1983 indicated that an additional \$417,000 was needed to continue the project through the current PACD of March 31, 1985. We understand that USAID/Yaounde intends to obligate that additional amount in FY 1984.

The original ProAg estimated the life of project cost to be \$3,250,000. The fourth amendment is expected to raise the total to \$4,200,000, a 29% increase. The increase appears to be attributable mainly to inflation, high vehicle parts and maintenance costs, and an increase in the amount of commodities procured. The primary change in commodities was that of computers and computer software.

No difficulties were reported to the evaluation team relative to or availability of USAID funding for project activities. In fact USAID/Cameroon appears to have been very accomodating in providing funds in support of the project.

Recommendation:

No specific recommendations are made except to encourage the continued strong support of the project, and to provide additional funding if the project is extended.

2. GURC Contribution:

The project agreement projects the GRC life of project contribution to total \$2,408,500, or 529,870,000 F CFA, (220FCFA - \$1.00).

The following Table V shows the GRC contribution to project related activities through the 1983/84 fiscal year.

Table V: GRC CONTRIBUTION TO AG MGT PROJ. 631-0008  
THRU FY 83/84  
(MILLION FCFA)

	<u>79/80</u>	<u>80/81</u>	<u>81/82</u>	<u>82/83</u>	<u>83/84</u>	<u>Total</u>
1. DEP Inv. Budg						
Studies	50	30	50	110	300	540
Statistics	55	50	50	60	82	297
Projects					200	200
2. DEP Operating Budget			90.5	130	122	342.5
3. Census of Agriculture					415	415
Total	105	80	190.5	300	1,119	1,794.5

Source: Division of Studies, DEP.

V. PROJECT OUTPUTS AND ACTIVITIES

A. Project Activities as they Relate to the PP and ProAg:

The PP and the ProAg identify many specific outputs of the project such as an Ag statistics handbook, improved crop acreage and production estimates, subsector analysis and studies, etc. They do, however, leave out four major, critical outputs which have a profound effect on the activities of the project. Neither the project description nor the project outputs nor the implementation plan recognizes the construction of an agricultural sampling frame, the design of an agricultural sample, the conduct of an agricultural census, and the installation of a computer and software for the Division of Statistics.

The construction of a sampling frame is a basic pre-requisite to improving agricultural estimates of acreage, production and inventories. One of the first activities of the project was to test the viability of an area sampling frame. It offers the advantage over other types of frames by being fairly permanent and stable. The process of construction of an area frame requires a great deal of time, material and manpower. This investment

can be justified by the fact that the frame offers a more or less permanent base from which samples can be drawn for taking a census, conducting annual surveys and from which samples can be drawn for special studies. We consider this to be a major output of the project.

The design of the sample for purposes of conducting an ag census or annual surveys as another output requires a considerable amount of statistical analysis. The allocation and selection of sampling units must be done so that they can reasonably estimate the population while at the same time being held to strict budget and time limitations, and also offer a somewhat permanent vehicle for gathering data.

The PP does recognize, in the technical analysis, that a census of agriculture would be conducted. However it does not recognize it as a project activity. A letter was sent to USAID from the Vice Minister of Agriculture on Feb. 23, 1983, informing them that a decree had been issued to conduct an agricultural census, that the area frame and sample would be developed and used, and that project equipment would be utilized for its implementation, (Annex IV). Although this letter was not officially answered, later USAID documentation indicates concurrence in the decision. The decision did have a profound effect on the project, in that it focused immediate high priority on the Census, a short term goal, and delayed the long term goal of annual surveys. It did however, also have the effect of accelerating development of material that can be utilized for annual surveys.

The PP and ProAg recognized that assistance would be needed in data processing. They did not anticipate the development of a data processing facility within the DEP. The PP argued that existing data processing facilities in-country would be sufficient to handle data summarization. Early in 1981 it was determined that the advent of micro computers offered a low cost means to an in-house data processing capability. It was determined that this would be a benefit to the project, and two micro computers and related equipment and software were ordered and installed.

Other project activities and outputs generally conform to the PP and ProAg.

Recommendation:

1. That the PP and ProAg be amended to reflect the four added activities, and their impact on the project description, outputs and implementation plan.

B. Statistics Activities

1. Area Sampling Frame:

The construction of an area sampling frame was a fundamental ingredient for the success of the project. Work on the frame began in five departments in 1981, was intensified with the arrival of the senior statistician in February, 1982 and completed in 1983. All areas were stratified geographically (by department) and by land use (urban, rural extension, rural intension, non-inhabited), although not all land use strata were present in each department. Maps (1:200,000 and 1:50,000 scale) were available for the entire country and area photographs for major cities and some other areas.

In 35 departments, count units generally varying in size from 6 to 13 km<sup>2</sup> and following natural boundaries were established. Segments approximately 1 km<sup>2</sup> were established within the count units.

In the other 14 departments, zones of 120-220 dwellings were used, following procedures developed in the population census.

### Strengths

The area frame construction is complete and is ready for use. It appears to be well accepted and understood by staff of the Division of Statistics. It has had some initial testing in the 1983 Pilot Survey and proven itself as a workable frame.

A particular strength of the area frame is its stability over time. In contrast to a list frame or village index, very few changes are required from year to year.

### Weaknesses

No major weakness has been noted. It may be helpful to change the size of some segments to obtain more homogeneity among segments, but if so, it should be done for the entire frame and not just for sampled segments.

### Recommendation

No recommendation for change is made. The 1983 Pilot Survey demonstrated the usefulness of the area frame and the Agricultural Census will provide a further test of the frame. A follow-up evaluation should be made by project staff to determine where modifications should be made.

#### 2. List Frame of Farms with greater than 50 Hectares:

A multiple frame approach will be used for the 1984 Agricultural Census and for future agricultural surveys. The area frame is to be used for all farms containing less than 50 hectares and a list frame of farms known to contain 50 hectares or more. This will enable large farms to be sampled with a higher probability, giving greater precision to the agricultural estimates.

To date, the list frame has not yet been established nor is an estimate available of the number of farms above 50 hectares for each department. This list should be available prior to any data collection in sampled segments. If knowledge obtained in the enumeration of segments is used in the compilation of the list frame, it can lead to biased procedures and biased estimates.

If the list frame includes a measure of size of each farm, as presumably it will, probabilities of selection should vary to give higher probabilities of selection to the larger farms. The largest ones may well be sampled with 100% probability.

### Strengths

If a good list of farms larger than 50 hectares can be obtained, this is a good procedure and should be followed. Considerably greater precision can be obtained for estimates of total production.

### Weaknesses

If a good list can not be obtained, resulting in many farms less than 50 hectares being included on the list or many farms more than 50 hectares being omitted from the list, then this procedure loses much of its advantage. If errors of this type occur, it may be necessary to set the lower limit at something greater than 50 hectares to obtain a satisfactory list. The list does not have to be perfect, but the more errors there are, the less valuable it is.

### Recommendations

a. Efforts should be made to develop a list frame as soon as possible. Identification of each farm should include a measure of size. An assessment of the percentage error of undercount (farms greater than 50 hectares included) and of overcount (farms smaller than 50 hectares included) should be at least estimated prior to data collection and compared to any discrepancies observed in the field. If a satisfactory list cannot be obtained, the use of the list frame should be reviewed and modified as appropriate.

b. In future years, sample segments should be rotated on a regular basis, replacing 20-25% of the segments each year.

### 3. Selection of Sample Segments for Agricultural Census:

A stratified sample of segments is to be drawn from each department. At least two segments will be taken from each urban or rural stratum within each department. Table no. VI shows the distribution of selected segments over the 49 departments and 10 provinces. Assuming an average of six farms per segment to be sampled, about 5700 farms will be contacted.

In departments in which count units were established, segments were selected with probability proportional to size. In departments in which census zones were used, segments were selected with probability proportional to the number of dwellings in each zone. A systematic sample of farms or households (operations) will be taken in each segment so as to yield about six contacts per segment. The interval between units to be interviewed and specification of which unit to start with will be designated for each segment. No substitution of farms will be made for farmers who cannot be contacted or for whom information cannot be obtained. Efforts will be made to obtain information from 100% of the sampled units.

The sampling design has two sampling fractions in the selection of farm units. The first is the probability associated with the selection of segments within departments and land use strata and the second is the probability of selecting farm units within the segment. These two probabilities are used in expanding the results from sampled units to estimates for the department and ultimately for each province and for the entire country.

Present plans for the 1985 annual agricultural survey call for a slight reduction in total number of segments to be made for easier location of segments and farms to be sampled and give good estimates of change over two years. The same segments should not be continued indefinitely, however, and a rotation of segments should be started by 1986. A portion of the segments, say 20-25%, should be dropped each year to be replaced with the same number of new segments selected randomly from appropriate strata and departments.

### Strengths

This sampling method is a sound one which yields satisfactory estimation procedures for means, totals, and rates and their standard errors. The specified sample size is expected to estimate the total number of farms with a standard error of about 2%.

### Weaknesses

Although the total number of farms may be estimated with satisfactory precision, many of the provincial estimates of yield and production can be expected to have standard errors of 7-15% or higher. These may seem high but, in reality, will probably be better estimates than have been available previously. With the budget constraint that exists, greater precision is unrealistic and may not even be necessary, depending upon how the data are to be used. The results of the 1984 Census will enable the Division of Statistics to make improvements in future agricultural surveys by allocating increased sample size in areas requiring greater precision and reducing it where lower precision can be tolerated.

For segments with the less than 25 farms, the selection of farms to be sampled appears adequate. For segments with a large number of farms, however, it may be useful to increase the number of farms sampled. Only six farms do not provide very good estimates for the segment in this case, and it is cost effective to take a somewhat larger sample, say in the range of  $(4 + \text{the square root of } n)$  farms, where  $n$  is the number of farms in the segment.

### Recommendations

- a. The allocation of sample segments appears satisfactory and no recommendation for change is made.
- b. Consideration should be given to increasing slightly the number of farms sampled in segments with large numbers of farms.

#### 4. Data Collection:

Data for the Ag Census will be collected in four separate surveys. The questionnaire for the first survey (Form 0) has been completed and was field tested in the 1983 Pilot Survey. Aside from a question of what information to include on livestock, the form and methods of data collection appear satisfactory.

Forms for the three surveys in which data will be collected on areas planted to each crop, yield, production, sales, and related factors, and on livestock have been outlined and had some limited testing in the Pilot Survey. A question remains as to whether data on yield and production of some crops should be collected from the farmer or by field measurement and must be resolved soon. This topic has been addressed in this report in the section on Objective Yield Estimation.

Training schools have been held for all enumerators and controllers for the Pilot Survey. An enumerators' manual has been developed for Form 0 and similar manuals are planned for the other forms. Future schools will be held prior to each survey for enumerators, controllers, and provincial supervisors.

Following the collection of data by the enumerators, each questionnaire will be examined and edited by the controllers to determine if data are complete and consistent and, if not, to get the necessary data to complete or correct the error. Further editing of each questionnaire is to be carried out by the provincial supervisor and again by the central staff after the questionnaire have been delivered to them. Additional edit checks will be made by computer following data entry. This is a good process and, if each person assumes full responsibility to do the job carefully, accurate data should result.

In addition to the editing process, it is important to conduct revisits of a relatively small percentage of households or farms to check the accuracy of recorded data. These quality checks should be carried out by both provincial supervisors and central staff. Where errors are found, and they will be, follow-up should be made with controllers and enumerators to correct deficiencies in the process. Unless an actual falsification of data entry has been encountered, the enumerators and controllers should not be made to feel that either one of them made a mistake but that the process is being refined.

#### Recommendations

- a. Data quality checks should be a routine responsibility of both the provincial supervisor and the central staff. Revisits should be conducted on 5-10% of all households or farms to check on a sample of the data collected. Not all questions need be repeated on all revisited farms.
  - b. Central staff should carefully review all edit changes to determine if changes should be made in instructions to enumerators.
5. Objective Yield Estimation:

The proposed procedure for collecting data on yield and production, and as tested in the 1983 Pilot Survey, is to ask the farm operator to provide information for amounts of each crop harvested for the crop cycle or for last week, how much was sold, and the price per unit. An alternative

proposal now being advocated by the Division of Statistics is to sample small plots within selected fields in each segment and to measure yield on the sampled plots to estimate yield for all farms in the segment or department. This change has been introduced because of criticism, primarily by the provincial supervisors, that the operators were unable to give accurate answers as to harvest yields.

The operators' estimates of harvest yields are subject to error; however, the amount of error on each field is not likely to be large. It is a type of error that may be either positive and sometimes negative and tends to cancel out when averaged over a number of farms.

Another concern with operator estimates is that for continuous crops they are for only the last week and subject to recall error. This problem is similar to that introduced by the operators' inability to estimate harvested yield accurately, although it is not as likely to be cancelled out by averaging over farms.

A further concern is that estimates of annual production for continuous crops, such as cassava, is made by assuming that the weekly harvest yield during sampled periods is the same as during non-sampled periods. Considering the number of weeks over which sampling occurs and the continuous use of such crops, this does not appear to be an unrealistic assumption.

It is only natural to consider a change in any procedure in which problems are recognized. One needs to be careful, however, that any alternative actually provides an improved procedure and not just another procedure with a new set of problems.

Examining the objective yield procedure more closely raises a number of questions whose answers should help in deciding which method is superior for the Ag Census. These questions have been discussed with the Division of Statistics with the following answers:

a. Q: Which crops would be include in objective yield measurements?

A: Native food crops harvested either continuously or on a crop cycle. No commercial crops such as cocoa, cotton or coffee.

b. Q: When will objective yield measurements be taken for each crop?

A: At a different time for each crop. At harvest time for those on a crop cycle. At an "appropriate" time for continuously harvested crop such as cassava. For example, at 12-13 months after planting.

c. Q: What type of harvest yield is the objective yield measurement intended to represent?

A: Gross yield or potential yield.

d. Q: How many fields will be selected for objective yield measurement in each department?

A: Two fields in each of about 25% of segments in each department. This number would be sampled for each crop.

e. Q: What size plot will be taken from each sampled field?

A: It is expected that either a 2m x 2m or a 4m x 4m plot, depending upon crop, will give an adequate number of plants for measurement of yield per plant.

f. Q: What estimation procedure will be used to estimate production?

A: An expansion from yield per plant to total yield (production) per department, viz. the departmental production estimate, calculated from data from all sampled segments in the department, as follows:

$$Y/P \times P/H \times H/F \times E$$

where:  $Y/P$  - average yield per plant

$P/H$  - average number of plants per hectare

$H/F$  - average number of hectares per farm

E - expansion factor, covering both the sampling of farms within each segment and sampling of segments within departments.

This estimation procedure would be used within each land use stratum. Standard error estimates can be made from variation among the yield per segment estimates if yield is averaged separately for each segment and not for the department as a whole.

### Strengths

- a. Measured yields do not suffer from failure to recall harvest accurately for a specified period of time.
- b. Measured yields are not subject to inability of farm operators to know or unwillingness to tell how much of a crop was harvested or sold.
- c. Measured yields do not rely on only "last week" data for continuous crops.

Elsewhere in this report, a listing is given of all individuals trained out-of-country and of all training programs conducted in-country. Our evaluation of these are as follows:

a) Out-of-country Training

Long term: This implies academic training greater than one year, often, but not necessarily, leading to an academic degree. Three individuals have completed M.S. degrees from George Washington University through the ISCP program at the U.S. Bureau of Census and are in responsible positions within the Division of Statistics. This is a good applied program in survey methods (much needed at this time) other programs should also be used which combine more methodological theory with application. The ISCP training gives some exposure to data processing and the use of computers but is fairly limited in this aspect. One other is still in training in Agricultural Statistics and a second is in training for computer science.

Short term: This is defined as training lasting less than one year but in practice is most often of 2-4 months duration. Such training out-of-country can be useful to provide advanced training on special topics, if language proficiency is adequate, but is not very useful for training at a beginning level. Three individuals have had two months each at the Bureau of Census, three have attended a four-month short course at New Mexico State University and two have had short term visits to USDA. Two of these individuals are no longer involved in this project.

b) In-country training

Training schools: Six-day training schools were held for enumerators and controllers in eleven locations through the country prior to the 1983 Pilot Survey. A follow-up, three day meeting was held with the provincial supervisors in January, 1984. These training schools were extensive and are vital to the success of the Ag Census. Additional schools will be held for enumerators, controllers and provincial supervisors before each new questionnaire is used in the field. A schedule of the proposed training program is attached in Annex V.

An enumerators' manual has been completed for the first questionnaire and is being printed for use with Form 0 of the Ag Census. It is a very workable document, professionally done. If the others are carried out with the same care and detail, this phase of the Census should encounter few problems.

c) Short courses and seminars: Available information shows only one short course on basic statistics and data presentation for central and provincial staff in February, 1982. No effort seems to have been made to present other formal seminars or short courses designed to supplement the statistical or data processing capabilities of the statistics staff. The major training effort has been directed, almost solely, toward the training schools and on-the-job training.

d) On-the-job training: This is considered a valuable and necessary function of the project. It appears to be working effectively in those areas of the project which have shown material progress and in which there are project advisors, i.e. area frame construction and initial data collection, but not in areas without project experience, i.e. data processing and studies on estimation procedures. In data processing, particularly in computing procedures, no project advisor is available to provide on-the-job training.

Recommendations:

- a. M.S. level training in statistical methods should be provided for two additional individuals. This will take two years or more, depending upon language proficiency. Our recommendation is to combine training at ISCP with MS training at an institution emphasizing Agricultural statistics. Institutions that could be used are Iowa State University, North Carolina State University and Oregon State University.
- b. B.S. level training in computer science and data processing should be provided for two individuals, to be started as soon as possible.
- c. A data processing technical advisor should be added to the project to provide on-the-job training and to help establish a data processing capability in the Division of Statistics. This is a vital role if the capability is to be realized, but may have to be filled by TDY assignments because of a shortage of qualified candidates. One possibility is to bring in a computer programmer on a full-time basis, supplemented by a computer scientist on TDY assignment for, say, two months a year.
- d. Short term training should be used to strengthen the training of qualified personnel in the Division of Statistics in special topics in Survey methods or Data Processing.
- e. In-country short courses and seminars should be provided for central staff of the Division of Statistics, and for departmental and provincial statistics staff. These could be offered by project advisors, central staff or by specialists in statistics or data processing on TDY assignments.
- f. Complete and field test training manuals for enumerators for Forms 1, 2 and 3 at least one month prior to training schools.
- g. Have central staff involved in all training schools and programs to insure that common methods are used in all areas.

- h. Involve provincial statisticians in appropriate aspects of survey activities in their province. Give them authority and responsibility following a thorough training program. They should recognize, however, that central staff must be fully informed of any problems and that they should work together to resolve issues of concern raised by them or by central staff.

#### 7. Data Processing:

Although the review and evaluation of the data processing facility, including personnel, equipment and software, is included in the data processing section of this report,, there are some aspects of the program that deserve comment at this time.

The data processing capability must be considered the most serious obstacle to timely completion of the Ag Census and successful completion of the project. Problems exist with operation of the equipment, with the use of the software developed for the project, and with availability and training of qualified personnel. It is possible, and perhaps likely, that the review now being conducted will solve the equipment problems, and even many of the software concerns, but is not expected to do more than make recommendations regarding the shortage and training of data processing personnel. Additional staff are needed for equipment maintenance, for computer programming and for on-the-job training

The programs developed by SRS appear suitable for the reports to be generated for the basic publication of Census data. They may be slow, in fact slow enough to delay publication beyond the desired deadline, but appear to give the necessary reports, subject to satisfactory operation of the equipment. Subsequent analyses will be needed by both the Division of Statistics and by the Division of Studies, however, which will require programs not available under developed software. This type of programming service should be offered by the Data Processing Section.

Neither the Project Paper nor the Project Agreement provide for a resident technical assistant, although there was provision for limited assistance from short-term consultants. With a shortage of adequately-trained computing and data processing specialists, both in Cameroon and in the U.S., it will be difficult to train and maintain the staff necessary for a sustained program as planned by the project.

On-the-job training would give a considerable boost to morale in the section and should improve retention of personnel. Because of the shortage of trained specialists, it may be necessary to use a combination of TDY assignments of computer scientists and of computer programmers to provide the necessary technical assistance.

#### Recommendations

See Data Processing Section.

## 8. Agricultural Statistics Handbook/Yearbook:

The Project Grant Agreement calls for the production of an agricultural statistics handbook and an improved "Agricultural Statistics Yearbook". These were envisaged as products of the annual surveys and presumably will be produced either as a single document or multiple documents. With the introduction of the Ag Census, no effort has gone directly into these documents. In their place, however, are the output publications anticipated from the Ag Census.

Output tables have already been specified by the Division of Statistics. They include estimates of number of farms, areas planted, yields, production, prices and related data for crops for each department, each province and the total country. Summary tables of national estimates will include standard errors. The only other estimates of standard errors which are planned are for provincial reports to be published at a later date.

Publication of results of the Ag Census is planned to follow chronologically as soon as possible after summary and analysis of the data from each survey period, possibly within two months of data summary for each department. A publication of aggregated annual data will follow the final survey of the Ag Census. Because of problems associated with data processing, the publication deadlines for Census data may be unrealistic. Slippage of these dates by two to three months seems likely. This publication is expected to contain tabulated data similar to those shown on the table of contents for the 1984 Agricultural Census Statistics (Annex VI). Subsequent analyses and publications are expected from the Division of Statistics and the Division of Studies.

### Recommendations

a. An outline of the data to be published following each survey of the Ag Census should be put in writing and made available to appropriate agencies and individuals, e.g. Division of Studies, Division of Projects, other directors and advisors in DEP, USAID, and others likely to make immediate use of the data.

b. Estimates of precision should be provided for most estimates. While it may be inappropriate or awkward to include standard errors for all estimates, enough information on precision should be included, particularly at the provincial and national level, to give users some idea of how well the population figures have been estimated.

## 9. Agricultural Surveys:

An original objective of this project was to provide the Division of Statistics with the capability to conduct agricultural surveys. Although the Ag Census has interceded with a high priority activity, the original objective remains paramount and must not be lost. In fact, the Ag Census is a good test of the Division's ability to successfully carry out a large

agricultural survey. Following the completion of the Census, the Division must demonstrate its commitment to a continuation of the annual agricultural surveys by conducting the 1985 survey. Planning for this must take place during 1984 and build upon findings in the Ag Census.

A large share of the enumerators used in the Ag Census will remain as permanent employees of the Division of Statistics. Equipment such as vehicles must be maintained and a replacement schedule established. The budget of the Division provides for salaries of the permanent enumerators (although at a lower salary scale) but not for maintenance or replacement of vehicles.

#### Recommendations

a. Definite plans for the 1985 annual agricultural survey should be developed and a schedule of activities established by July 1, 1984.

b. The Ministry of Agriculture should recognize the need for continuing surveys by committing monies to fully fund the planning and operation of the annual agricultural survey.

Table VI: Total Number of Segments Selected by Strata, Province and Department - 1984 Agricultural Census

Province/Department	Type of Segment		Total Segments
	Urban	Rural	
<b>I. Extrême Nord</b>			
1. Logone et Chari	2	18	20
2. Mayo Sava	2	18	20
3. Mayo Tsanaga	2	26	28
4. Diamaré	6	22	28
5. Mayo Danay	2	22	24
6. Kaélé	2	18	20
Subtotal	16	124	140
<b>II. Nord</b>			
1. Mayo Louti	2	16	18
2. Bénoué	4	16	20
3. Faro	2	10	12
6. Mayo Key	2	12	14
Subtotal	10	54	64
<b>III. Adamaoua</b>			
1. Faro-et-Deo	2	10	12
2. Vina	4	12	16
3. Mbera	2	14	16
4. Mayo Banyo	2	12	14
5. Djerem	2	8	10
Subtotal	12	56	68
<b>IV. Est</b>			
1. Lom et Djerem	4	12	16
2. Kadey	2	14	16
3. Haut Nyong	2	14	16
4. Boumba et Ngoko	2	12	14
Subtotal	10	52	62
<b>V. Central</b>			
1. Mbam	4	20	24
2. Haute Sanaga	2	14	16
3. Lékié	2	26	28
4. Mefou	2	18	20
5. Mfoundi	14	6	20
6. Nyong et Mfoumou	2	12	14
7. Nyong et Kellé	2	14	16
8. Nyong et So'o	4	12	16
Subtotal	32	122	154

VI. Sud

1. Ocean	2	12	14
2. Dja et Lobo	2	14	16
3. Ntem	4	16	20
Subtotal	8	42	50

VII. Littoral

1. Moungo	14	14	28
2. Nkam	2	12	14
3. Wouri	10	8	18
4. Sanaga Maritime	4	12	16
Subtotal	30	46	76

VIII. Sud Ouest

1. Manyu	2	22	24
2. Ndian	4	12	16
3. Meme	6	18	24
4. Fako	8	12	28
Subtotal	20	64	84

IX. Nord Ouest

1. Donga Mantung	2	22	24
2. Mentchum	2	22	24
3. Bui	2	20	22
4. Momo	2	18	20
5. Mezam	6	22	28
Subtotal	14	104	118

X. Ouest

1. Noun	4	24	28
2. Bamboutos	2	20	22
3. Menoua	4	24	28
4. Mifi	6	22	28
5. Haut Nkam	4	12	16
6. Ndé	4	12	16
Subtotal	24	114	138
OVERALL TOTAL	176	778	954

with 6<sup>1</sup>/<sub>2</sub> farms/segment - 6,200 farms (sample)  
with 5<sup>1</sup>/<sub>2</sub> farms/segment - 5,250 sample farms

C. Economic Activities:

Throughout this project, to date, the statistics element of the project received high priority and focus, in fact it is rather obvious that the DEP viewed this as the primary activity of the project. It is true that the development of a good statistics system is the first step in building an analytical capability which will, in turn, lead to an enlightened and realistic policy formulation capability. However, statistics is not an end in itself and must be followed-up with an analytical capability so that the information developed serves a useful purpose in making judgements and decisions, especially in areas of planning and policy.

The above statistics/economics approach was apparently the intent of the PP and the ProAg. They identified a number of economic activities to be implemented, during the life of the project, so as to train a cadre of functioning economists and planners. These activities include: an agriculture sector analysis, sub-sector analyses, policy papers, planning proposals, project identification and monitoring, feasibility studies, and a documentation center.

1. Sector Analysis:

A sector analysis programmed in the PP for the third year of the project was not completed. This activity was postponed for two reasons: (1) FAC conducted a sector analysis after this project was designed and before it was initiated, and (2) the statistical component of the project did not generate new data on which to base a revised sector analysis.

The decision to delay a sector analysis until such time as new data becomes available was valid. It now appears that the Statistics Division will be generating new and improved data beginning with the Ag Census in 1984. Current plans call for data to become available during the first half of 1985, and for all census data to be published by July 1 of 1985.

The published census tables will contain only a limited amount of information relative to what is in the data itself. (See Annex VI for a list of census output tables). The data itself contains much more information but requires additional analysis, cross tabulation, and processing, before it can be of value in supporting planning and policy decisions. High priority and timing requirements for the basic census data preclude the processing for analytical purposes on the initial rounds of census tabulation.

This new data with other primary and secondary data should be the basis for a series of subsector reviews, followed by a broad review of the agricultural sector. It would provide the analytical basis for supporting the planning process as well as assisting in identifying development and investment priorities, major policy issues and other more in depth and focused studies. It would be especially important and supportive in preparation of the Sixth Agriculture Plan to be developed in 1985/86.

Recommendation:

That a series of subsector studies be carried out leading to a Sector Review to be completed in early 1986, in order to serve as an input into the Sixth Plan. (See Annex IX for examples of studies and analyses that might be undertaken.)

2. Sub-Sector Analyses and Special Studies:

Economists in DEP and the project made a rapid start in identifying and conducting a series of sub-sector and special studies. This was done in the context of DEP priorities and in the initial stages of the project. Advisor activity in studies declined somewhat, over the life of the project, as they became more involved in project design and consultation.

The following list of studies resulted in reports and were developed through analysis of both primary and secondary data. Primary data was collected and the analysis completed by DEP and Project economists. Their close collaboration resulted in either major report, briefing papers, or Terms of Reference for future studies.

Studies Completed in 1981:

Reports:

Food Problems in the Littoral Sud  
National Food Plan  
Rice Marketing Situation

Papers:

Review of Food Policy Effects on Nutrition  
Structure of the North West Cooperative Assoc.

Studies Completed in 1982:

Reports:

Literature Review on Food Marketing

Papers:

Self Sufficiency Index (Food)  
Terms of Reference:

National Food Marketing Study  
Onion Marketing Study

Studies Completed in 1983:

Reports:

Socio-Economic Impact Study of the project  
FSAR (Special Fund for Rural Action)  
Cocoa Cost of Production

A number of the above studies were major in the context of amounts of analysis undertaken and the use to which the final reports were put. Most notable were the National Food Plan, which was used in preparation of the fifth five year plan. Others were the Socio-Economic Impact Study of FSAR, Analysis of Food Problems in the Littoral Sud, the Structure of the Northwest Cooperative Assoc. and the Cocoa Cost of Production Study. These reports reflect an in depth analysis of the sectors, even though there were rather severe data limitations. All of these studies have been and are being utilized in the decisions that make up the planning responsibilities of the Division of Studies.

Recommendation:

It is anticipated that additional studies will be identified as a result of the planning process and from the sector review to be conducted within the next two years. It is also anticipated that the Statistical Division of DEP will have the capability for designing samples for special studies. Therefore, it is recommended that a long term plan be developed, which identifies and prioritizes the study requirements for the planning process. There should also be close collaboration between economists and statisticians within DEP in order to effectively carry out those studies which require a statistical base. (See Annex IX for examples of studies and analyses that might be undertaken.)

3. Project Feasibility, Design and Evaluation:

Project design activities increased over the life of the project to date, and accounted for a considerable amount of both Div of Studies and advisor staff time during 1983.

Major Project feasibility and/or design efforts were completed as follows:

- 1981: SEMRY III
- 1982: TOR Food Supply Project in the Littoral-Sud
- 1983: Littoral-Sud Project Design  
Tech Support Centers Feasibility  
South West Province Project Feasibility

Neither the project outputs nor the implementation plan specifically addressed project design. The description, however, did recognize this function in the end of project status. Responsibility for project design lies within the Division of Studies of DEP. Feasibility studies are, in reality, analyses of the potential benefits and of alternative means of achieving those benefits. Therefore it is logical to conclude that project feasibility studies and project design should be a function of the project and DEP. It should be recognized, however, that project design entails much

more than the analysis of economic factors, it also requires skills in budgeting, staffing, logistics, management and other elements.

Recommendation:

That continued analysis be directed towards project feasibility studies, but only as a secondary effort.

4. Training of Economists:

The PP and the ProAg identify specific training programs for the economists. Advanced degree training in economics was proposed in those documents, as was on-the-job training and more formal in-country and third country short courses. Training was to be accomplished in such a manner so that at the end of the project, "there would remain a cadre of Cameroon economists and planners who will have produced and who will be capable of producing on a regular basis: an agricultural sector analysis and requisite sub-sector analyses; policy papers and planning proposals; project monitoring and evaluation functions; project feasibility and identification; and an annual report of the combined operations of the Ministry of Agriculture.

In considering the training goal set forth above, it is obvious that the training element of this project is grossly inadequate. The 1982 evaluation recognized this also, but accepted the limitations of available staff for training. Considering the staffing patterns of the Divisions of Studies and Projects, much larger numbers of trained staff are needed. The participants currently studying in the U.S. should help to some degree, but turnover of personnel will probably limit the overall effectiveness of the project training.

a. Out-of-Country Training:

Long-Term

A total of four economists are currently studying in the U.S. Three of these are graduate degree participants in the disciplines specified in the revised training plan. The fourth is a non-degree candidate in rural economy. The three MS candidates are scheduled to complete their training in March 1985. The fourth should have completed his training in Dec. 1983, but has not as yet returned to Cameroon.

Additional training of economists is needed, but limitations of staff prevent the long-term absence for a large numbers of participants.

Short Term

Short-term training has been limited to three participants excluding those in statistics. This can be a very useful form of training, especially for those who have the training and background and need additional training in special areas. It must not be considered a substitute for academic training.

A number of specialized short courses were identified in the revised training program; however, very few of them have actually been carried out. We would encourage continued use of short courses throughout the remainder of the project.

b. In-Country Training:

Short Courses

No formal in-country training courses were given that concentrated on the development of economic skills.

c. On-the-job Training:

This element of the project is very important in achieving its objectives. Advisors have been working very closely with DEP staff on a number of activities including analyses, project feasibilities, etc. However, changing job assignments of the marketing advisor, heavy administrative responsibilities of the senior advisor, and turnover of personnel have limited the overall effectiveness of on-the-job training.

Recommendations:

1. MS level training in Agricultural Economics, and economic analysis should be provided for at least two participants. This appears to be the maximum number that could realistically be sent.
2. Short term training should be continued in accordance with the revised training program.
3. In-country courses and seminars should be given in as many areas as possible. Two important areas are for the Division of Statistics to present a seminar on what is happening with the sample, census, and annual surveys and what it means to the economists. The economists should give seminars on the data requirements of their work for the statisticians. This exchange of seminars could improve the very poor communication between the Divisions that currently exist.
4. We would encourage more long range and stable assignments of both advisor and counterpart staff so maximum benefit can be derived through the exchange of ideas and other forms of on-the-job training.

5. Documentation Center

The Project Paper and the Project Agreement call for the improvement of a documentation center. Efforts are being made in the DEP to develop a reference center. Currently most documents consist of letters, reports, and project information. There is limited reference material such as professional journals or current analysis.

The World Bank team has provided assistance to establish a classification system but classifying is falling behind. In addition to establishing a classification system the DEP is also trying to strengthen some of the Documentation Center activities to include Book binding and copying facilities. The Ag Mgt project is providing a copy machine and is in the process of developing an order for books and other reference material. The project is also providing local librarian assistance.

The main constraints to an effective documentation center is the shortage of adequate space, man power in completing and maintaining the classification, and procuring reference materials useful to the DEP. It is not being established as a complete reference library but rather a center for the use of DEP in making studies, planning projects and carrying out effective Agricultural sector studies.

Recommendation:

That the current level of input into the documentation center be continued. However, in view of the interest and assistance being given by the IBRD, and the re-emphasis on economic analysis, it is recommended that no new level of input be included by this project.

D. Data Processing

Neither the Project Paper nor the Project Agreement provide for the creation of a data processing section or the installation of computing equipment, within DEP. It was originally envisioned that the governmental computer' (an IBM 370/158) would be used for tabulation and processing of data. However, by 1981 the current technology in small computers made it possible for the project to obtain microcomputer equipment capable of handling data from agricultural surveys, at a relatively low cost. USDA's SRS had experience installing such equipment in other developing countries and expected that this project would be able to benefit from a similar installation. This was a reasonable expectation, and decisions were made to procure the equipment and software.

The equipment is set up to handle four concurrent users - two on each of the two microcomputer systems. Each system consists of a microcomputer, two CRT terminals for data entry and display, dual data storage units, and a large capacity storage unit. The equipment is capable of processing limited agricultural survey data.

Computer programs were developed by SRS to do the data entry, manipulation, processing, and printing of survey data and expansion tables. Additional programs were developed to produce two-way tables and to do batch editing of the data. This software is apparently sufficient to process the annual survey if adequate hardware is available, however, it has not been fully tested, further testing should be completed.

The project did not provide for resident technical assistance in data processing. The use of microcomputer equipment can be a cost effective way to do data processing, but a higher level of expertise in the user/owner is

required since assistance and advice are usually not available from the vendor. This level of expertise is attained and enhanced through user groups, access to publications, other users, retail computer stores, and a variety of other ways. This type of on-the-job training should have been provided by project through a resident computer specialist. Most universities have not yet implemented this type of training with microcomputers, so it is only available in informal ways.

Data processing is the most serious obstacle to the timely completion of the Agricultural Census. If the equipment continues to operate as it is now and without future breakdowns, the survey specification in the computer software, the associated testing, and necessary training will require all the available time before the census data begins to come in. Additional resources in the form of expert computing personnel will be required to meet the deadline. Until such time that a resident advisor is assigned it will be incumbent upon the present advisors to assist in the management of the data processing section.

The long-term viability of data processing within DEP will require computer hardware and software upgrades, technical assistance, additional DEP personnel, and additional University training in data processing.

#### 1. Assessment of Hardware

At the time of selection, the NorthStar equipment was state-of-the-art and is, in fact, considered top-of-the-line microcomputing equipment. Clearly, allowing the equipment to sit in the rain, as apparently happened when the equipment arrived in Cameroon, was a contributing factor to the difficulty of installing and starting it up. On the surface there does not appear to be permanent damage to the computer. There is visible corrosion on some housing parts (screws, nuts, fan grill) and some rust on the power transformer. This should not cause failure of the system within the next few years. It is possible that there is some corrosion on metallic contacts within the electronics, but this would require some magnification to assess. Most of the highspeed connector parts are gold plated to resist corrosion. If there is corrosion on the electronic parts, the failures would most likely be intermittent and nonrepeatable rather than hard failures, which would be more easily diagnosed. Such failures can create a sense of frustration and complete lack of confidence in the hardware and/or software. In the past there appear to have been problems as a result of electrical failures and power fluctuations. Currently, no such problems are visible. The voltage converter is a sophisticated unit which can turn out 110V under very adverse conditions. The computer itself has a large power supply capable of withstanding some transients and sub-second interruptions. The same appears to be true of the Morrow hard disk add-on. The terminals are a popular terminal for use both with microcomputers and larger time-sharing systems. The Anadex printers originally selected were not of the same quality as the rest of the equipment and would likely have been useful only under the best of conditions. The GE printer which arrived 1 February 1984 appears to be of high quality and should give good service.

2. Current status of hardware

The following equipment is currently on site:

- a) NorthStar Horizon
  - 2 double sided/double density floppy disk drives with controller
  - 2 HRAM 64 K memory boards
  - 1 HSIO serial interface board
  - 1 Morrow hard disk controller board
  
- b) NorthStar Horizon
  - 2 double sided/double density floppy disk drives with controller (one drive not operational)
  - 1 HSIO serial interface board
  - 2 HRAM 64K memory boards
  - 1 Morrow hard disk controller board
  
- c) NorthStar Disk Expansion
  - 2 double density/single sided disk drives (not operational)
  
- d) Morrow 20Mb Winchester disk drive
  
- e) Morrow 20Mb Winchester disk drive
  
- f) Lear-Siegler ADM 5A
  
- g) Lear-Siegler ADM 5A (intermittently operational)
  
- h) Lear-Siegler ADM 5A (not operational)
  
- i) Lear-Siegler ADM 5A (not operational)
  
- j) GE Corresponden 510 Printer
  
- k) Spare floppy disk controller (not operational)
  
- l) Spare Morrow hard disk controller board
  
- m) Spare HRAM 64K board
  
- n) Spare motherboard.

Upon my arrival, I found the NorthStar No. 1 to be properly functioning with one ADM 5A terminal (No. 6). NorthStar No. 2 was not functioning. Upon inspection a simple problem was found and corrected and the unit seemed functional. Further testing showed that the floppy disk controller was bad, but gave intermittent failures rather than a hard failure. The controller was switched with the spare and the unit passed testing. Therefore, the

A N N E X IX

POTENTIAL STUDIES AND ANALYSES

## ANNEX IX

### Potential Studies and Analyses

The following subsector and special studies might be undertaken as a result of the statistical and economic inputs.

This is an exemplary list and should not be considered as absolute or final. Actual analyses undertaken will depend to some degree on timeliness and ability to process the data as well as the priorities set forth by the MINAG.

1. Structure of the Traditional Farm Sector
2. Structure of the Commercial Farm Sector
3. Fertilizer use and potential use, efforts on productivity.
4. Fertilizer Distribution System and its Effect on Agricultural Production.
5. Production Potential by Sector or Region.
6. Agricultural Price Structure.
7. Marketing Infrastructure.
8. Effects of Marketing Infrastructure on Agricultural Production.
9. Agricultural Development Investment Alternatives.
10. Cost of Production Studies.
11. Agricultural Labor Practices.
12. Agricultural Price Index
13. Farm Income Analyses.

**A N N E X   I X**

**POTENTIAL STUDIES AND ANALYSES**

unit now listed as spare (No. 11) is bad. After testing all floppy disk drives, three of the total of six drives were determined to be bad. Two are completely nonfunctional while the third is intermittent and is currently in NorthStar No. 2. The two Morrow Winchester disk drives appear to be in good shape. Of the four ADM 5A terminals, only one is fully functional. There is currently not sufficient hardware documentation on site to allow anyone to make the necessary repairs. The hardware manuals should be ordered as soon as possible.

### 3. Problems Observed

The first problem, as mentioned above, is the condition of the hardware resulting from exposure to water. It is not clear whether this has been remedied or whether there will be continuing problem as a result of corrosion on connectors and on IC sockets on the printed circuit boards.

The second problem is a consequence of an inexperienced person attempting to fix problems, which appear intermittently, and doing board swapping with spares that are only partially functional. Consider, for example, NorthStar No. 2. The disk controller and a disk drive were only partially functional. In testing with the spare controller the unit would not work properly. The normal response would be to replace the drive, but with a bad controller the spare drive appeared not to be good. Therefore, the operator assumes that some other part of the computer is at fault. Compounding the problem is the fact that the errors occur intermittently, at any time during the testing it might appear that the unit is fixed. Assessing and repairing such a condition would require someone with extensive experience with the equipment and in dealing with such problems.

### 4. Assessment of Software

The software to support this project was developed in two parts - the Survey Data Processing System (SUDS), and the Crosstab System. SUDS has been operational in developing forms for several years and is in use in several countries. The system in Cameroon provides the ability to enter questionnaire design parameters, specify range and consistency tests within sections of a survey, enter the data from questionnaires, and produce direct expansion estimates of the data. The software provides a cost effective way of processing survey data on inexpensive equipment for the above functions. When installed, the software lacked accurate and complete documentation for the intended user. It was not possible for an inexperienced user to follow the documentation for processing a survey. This was compounded by the lack of a printer to produce the documents which were provided on diskette. In addition, the software is lacking in "robustness", that is, the ability to handle any users action without "crashing". The inexperienced user will often enter commands in a sequence not anticipated by the programmer. Well designed software will fail gracefully rather than "crashing" with an operating system error message. This has been a problem for the project. The inexperienced user becomes confused as to 1) what is wrong and 2) how to proceed. Such a software "crash" will often cause subsequent problems when the user restarts, because

partial specifications may exist or disk files may remain with missing or incomplete information in them. The documentation needs recovery procedures for situations such as just described, as well as for electrical power interruption, or other disruption of processing.

The Crosstab System is an add-on to SUDS, in response to requirements for two-way tables by the project. Correspondence shows that the contract time required to produce this software was grossly underestimated by SRS, and that debugging was still in process when installed in-country by the TDY person. Documentation for the use of the software is very minimal. The software has not been tested thoroughly and the discovery of errors should be expected. SRS has estimated that the processing of the Ag Census surveys will be slow. For the planned 5700 questionnaires the estimate for producing one two-way table ranges from two to eight hours with realistic expectations being on the high end. This is totally unacceptable for processing the Ag Census within the time frame required. Use of the Crosstab System on the NorthStar equipment, once debugged, should be limited to smaller surveys.

Development of the software has been constrained by the capacity of the microcomputer upon which it has been implemented. This is a reasonable trade-off for the cost of the hardware. Provision of generalized survey processing software by SRS, rather than simply programming the entry and analysis of one survey document, is to the advantage of the project and the long-term utility of the equipment and software. It does require the training of DEP personnel in the specification of survey input and analysis parameters to the software. The long-term result should be the institutionalized ability to process and analyze agricultural surveys.

##### 5. Current Status of Software

The following application software is currently on site:

- a) Survey Data Processing System (SUDS) with user manual  
(version of 19 January 1984)
- b) Crosstab System with user manual
- c) Microstat statistical package
- d) Supercalc spreadsheet software
- e) Wordstar word processing software
- f) Language processors: BASIC, BAZIC
- g) Operating system: NorthStar DOS
  - MICRODOZ operating system
  - JOESHARE timesharing operating system
  - CP/M operating system and utilities

This software is useful for many applications such as wordprocessing, financial analysis and reporting, and statistical analysis. The manuals are available, but better documents in book form would greatly supplement the manufacturers material and, perhaps, provide tutorials and examples.

6. Data Processing Organization, Personnel and Training

The person responsible for the data processing organization is the Chief of the Statistics Service and reports to the Chief of the Division of Statistics. His training includes a certificate in survey design, from George Washington University, with limited coursework in data processing. He lacks experience in programming and data processing. His staff consists of four survey processors, but does not include a systems analyst or computer programmer.

Training in the use of the current equipment and software was done by SRS. The training appears not to have been well organized, and was not supported with printed materials in the form of manuals or workbooks. Consequently, neither the data processing manager and his staff, nor any of the project personnel know how to use the survey processing software.

7. Needs and problems

a. There is a lack of confidence in the computer system (hardware and software). This has been well deserved, but the current installation should begin to stabilize. The uninterruptible power supply (UPS) will create a stable electrical environment. Repair of the nonfunctional hardware will provide a workable system with backup parts. The software is virtually untested on this project.

b. There has been no resident technical assistance in the form of a counterpart person for the data processing manager. Consequently, a person just out of school and without computing experience was expected to run and maintain the microcomputers. A significant part of the cost savings in microcomputers is in the installation, testing, and primary maintenance by the owner/user. When problems occurred, the manager of the equipment was unable to diagnose whether the fault was electrical environment, hardware, or software. With spare parts available, some of which were faulty, the maintenance was done by swapping parts until the unit worked. At times this created a worse situation than originally existed. A counterpart person should have been provided to train the data processing manager in using microcomputer equipment.

c. The installation and training by the TDY's from SRS created a problem in the role model provided to the data processing manager. Rather than concentrating on the application of software and the processing of survey data, the SRS personnel were busy debugging the software and left the impression that this is the normal mode of operation. Consequently the emphasis was on programming and debugging and is the model followed by the data processing manager.

d. The current situation makes it very doubtful that the Ag Census can be processed on the current system within the time constraints. In the next three months the software must be tested with actual survey design parameters and data, their output tables specified, the edit checks specified, and data entry operators trained. This does not allow time to specify and test the tables to be produced. Provision must be made to do this elsewhere.

e. The Crosstab System as provided by SRS on 19 January 1984 is not functional. Not only is the method of using the Crosstab System, in conjunction with the hard disk based SUDS, cumbersome and difficult to understand by the inexperienced user or trainee, it will not run because of some errors in the program. For example, the questionnaire data is written on the floppy diskette in a file named "QUE-DATA". The Crosstab System expects data to be in a file named "QUE.DATA". It is obvious that these two pieces of this survey processing package have not been tested together. This raises questions about the comprehensiveness of the testing in general. A second problem, which was previously reported to SRS, is that the system crashes when an attempt is made to enter the tab tests to process the test questionnaire. Obviously, the system has only been tested on sample data and not on anything as large as the proposed questionnaires of this project. It is likely that a significant number of errors will be encountered as this system is brought into use.

f. The DEP needs to provide additional personnel for data processing. There should be at least one programmer for testing the survey processing software and making modifications as directed by a systems analyst or computer specialist. In the future this person must be prepared to set up and do programming on economic models, regression analysis, etc.

## 8. Recommendations

a. Confidence in the computer can only be attained by using it regularly, and meticulously documenting problems that occur. The survey processing software should be exercised in testing and training.

b. Arrange a maintenance agreement with Dr. Kwankam or someone of equal qualification.

c. The maintenance person or his designate should be the only person to open or work on the hardware.

d. Technical assistance should be provided in data processing for the remainder of the project. If possible, a computer specialist should be assigned to the project for at least two years. If such a person is not available, a computer programmer should be assigned with occasional TDY visits by a specialist. This person could provide training in computer operation, data processing, and diagnosis of hardware/software failures.

e. A backup system for processing the Ag Census should be arranged. The following alternatives are suggested:

- 1) The survey data can be entered and expansion tables printed on the current equipment. The two-way tables and other statistical processing can be done on another local mainframe computer - either the government or university computer.

- 2) The survey data can be entered and expansion tables printed on the current equipment. The two-way tables and other statistical processing can be done in the US on a larger computer.
- 3) The survey data processing can be contracted out locally for data entry and analysis.
- 4) The survey data processing can be contracted out to a private firm or university elsewhere.

Alternative 2) is recommended.

Alternatives 1) and 2) both have the desirable component of providing some experience and training for the DEP. Technical assistance will be required in setting up the survey software, and assistance would be required at the time of data entry to provide advice, assist in dealing with problems that will occur, and help maintain the equipment. The most difficult part will be transferring the data from the microcomputer to the mainframe computer. Mainframe computers do not have a five and one quarter inch floppy disk drive. Therefore, a method must be devised to transfer the data as if the microcomputer were a terminal on the mainframe computer. For alternative 1) this would require someone to write programs for the microcomputer and the mainframe in order to transmit and receive the data and check for errors. For alternative 2) it is possible to find an existing capability to transfer the data, such as at Oregon State University where this is a common practice.

Alternatives 3) and 4) have the drawback of not providing experience for the DEP in survey processing. If the data are entered on the microcomputer, DEP personnel can begin analysis of the data while the primary output tables are produced elsewhere. Subsequent table output can be done on the in-house equipment even if the processing requires several hours.

f. An agreement with a computer specialist should be arranged to fix the problems with the Survey Data Processing System and the Crosstab System or to reprogram those functions.

g. DEP should send at least two people for BS level university training in data processing.

h. The following equipment and materials should be ordered: one printer, one floppy disc drive, one arithmetic processor board, repair manuals (for the computer, terminal and printers), and other spare parts.

E. Data Processing Supplement:

During the evaluation an attempt was made to devise a plan for addressing immediate needs and problems in tabulating the Census data. That plan, which resulted from various meetings with the Director and staff of the Statistics Division, project personnel and USAID officials, is contained in this supplement to the Data Processing section of this evaluation.

Yaoundé, le 17 février 1984

M. Joseph Kamga  
Directeur  
Direction des Etudes et Projets  
Ministère de l'Agriculture  
Yaoundé, Cameroun

M. William F. Litwiller  
Chef de la division Agriculture  
et Développement rural  
USAID/Cameroun

Cher Monsieur Kamga,  
Cher Monsieur Litwiller,

Au cours de mon premier entretien avec chacun de vous, lors de mon arrivée au Cameroun, M. Kamga m'a exprimé sa préoccupation concernant le traitement informatique des données pour le Recensement agricole de 1984. Il a également exprimé le désir que tous les efforts soient faits pour traiter les données au Cameroun même.

L'informaticien a terminé son évaluation, mais n'a pas pu organiser une interview finale avec M. Kamga. Au cours de l'interview finale avec Mme Balepa, un programme a été proposé pour que les données du recensement soient informatisées et pour développer les capacités de traitement informatiques des données à long terme; à l'intérieur de la DEP. La proposition ci-dessous a été mise au point par l'équipe d'évaluation travaillant avec le personnel du Directeur de la Statistique et le personnel du projet, la semaine dernière.

La proposition répond à l'essentiel de ce qu'a demandé M. Kamga: que la majeure partie des données du recensement soit traitée au Cameroun, avec l'équipement de la Division de la Statistique.

Quelques problèmes fondamentaux restent, et je voudrais en discuter dans ce memo. J'essaierai de présenter les avantages/inconvénients d'une tabulation telle que nous l'avons préparée, en regard de ce que comporterait l'utilisation d'un gros ordinateur «mainframe» dans le pays.

1. Il faut bien voir que:
  - a. Les ordinateurs existent à la DEP, Division de la Statistique.
  - b. Un programme informatique (software) sera opérationnel le 1er juin 1984.

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- c. L'ordinateur et le programme informatique feront la tabulation des données pour le recensement de 1984, mais la capacité limitée de l'ordinateur empêche la tabulation de tous les tableaux croisés (crosstabs) des données dans les limites de temps imparti.
2. La proposition ne recommande pas que les questionnaires quittent le Cameroun. Les données seront traitées de la façon suivantes:
    - a. Tous les questionnaires resteront au Cameroun.
    - b. Les données du cadre par zones et du cadre par villages seront enregistrées sur disques informatiques à la Division de la Statistique.
    - c. Les données des exploitations extrêmes (plus de 50 hectares ou plus de 300 têtes de bétail) ne seront pas enregistrées sur ces disques. Par conséquent, les données complètes du recensement n'existeront pas sur ces disques.
    - d. Trois copies des disques seront faites par la Division de la Statistique.
      1. Une pour la Division de la Statistique.
      2. Une par mesure de sécurité.
      3. Une pour le traitement aux Etats-Unis des tableaux croisés d'échantillonnage par zones et par villages.
  3. La Division de la Statistique traitera les données comme suit:
    - a. Elle fera toutes les entrées de données.
    - b. Elle rédigera les données.
    - c. Elle enregistrera des données «propres» sur les disques.
    - d. Elle assumera également le traitement:
      1. des tableaux directs d'expansion
      2. des tableaux de sommaires «one way»
      3. des tableaux croisés limités
    - e. Elle combinera les données d'échantillons de zones, de villages et d'exploitations extrêmes.
    - f. Elle publiera les données.

4. L'ordinateur des Etats-Unis fera le reste des tableaux croisés pour les échantillons par zones et par villages seulement, et fournira le soutien nécessaire.

5. Avantages et inconvénients du plan proposé:

Avantages

1. Utilise l'équipement existant à la Division de la Statistique.
2. Développe et utilise le programme informatique qui a été élaboré et adapté à des besoins spécifiques, qui peuvent ensuite être transférés à une nouvelle machine de plus grande capacité.
3. Forme du personnel informaticien de la Division de la Statistique pour de futures enquêtes et analyses.
4. Toutes les données sont retenues dans un ordinateur maison pour de futures analyses et études.
5. Meilleure probabilité de terminer en temps voulu.
6. Moindre coût, probablement, pour le traitement informatique du recensement, parce que partiellement fait sur l'ordinateur de la DEP.

Inconvénients

1. Les tableaux croisés pour l'échantillonnage par zones et par villages sont traités aux Etats-Unis.
2. Nombreuses communications téléphoniques internationales et voyages du personnel local aux Etats-Unis.

6. Avantages et inconvénients de l'utilisation d'un ordinateur «mainframe» dans le pays:

Avantages

1. Toutes les données seront traitées dans le pays sur une machine.
2. Aucune donnée ne quittera le pays.
3. Liaison étroite entre les usagers et les informaticiens.

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### Inconvénients

1. Le programme informatique mis au point par SRS était destiné au NorthStar, ce qui fait que de nouveaux programmes auront à être mis au point et/ou des programmes existants auront à être modifiés. (M. Snyder, spécialiste informaticien, a estimé que cela prendrait quelque six mois).
2. Plus grand risque de ne pas terminer en temps voulu, la mise au point du programme informatique ayant commencé avec retard.
3. Données moins facilement disponibles pour analyses et études ultérieures et dépendant complètement de l'accès au gros ordinateurs «mainframe».
4. Le personnel informaticien de la Division de la Statistique ne sera pas formé.
5. Coût probablement plus élevé pour le Gouvernement du Cameroun de la tabulation du recensement.

Au cours de la mise au point du plan proposé, nous avons essayé d'être objectif et de garder dans le pays le plus d'opérations possibles. Le désir de M. Kanga de traiter les données du recensement dans le pays est très logique et rationnel. Toutefois, le projet a également le souci du futur développement de la capacité de traitement de données d'enquêtes annuelles. Les nécessités informatiques pour ces enquêtes seront à peu près les mêmes que pour le recensement. En conséquence, nous avons conclu que ce plan est l'intérêt à long terme du projet, et nous le soumettons à votre examen. Quoi que vous choisissiez, je recommande qu'une décision rapide soit prise, les délais, si vous décidiez d'adopter notre plan, ce faisant de plus en plus court, et devenant impératifs, si c'était les ordinateurs «mainframe» dans le pays qui étaient finalement choisis.

Je vous prie de croire, Messieurs, à l'assurance de ma considération distinguée.

John Fliginger  
Chef d'Equipe Evaluation

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FEB 16 1984

Mr. Joseph Kamga  
Director  
Direction of Studies and Projects  
Ministry of Agriculture  
Yaounde, Cameroon

Mr. William F. Litwiller  
Chief  
Agriculture and Rural Development Division  
USAID/Cameroon  
Yaounde

Dear Messrs. Kamga/Litwiller

During my initial visit with both of you, upon my arrival in Cameroon, Mr. Kamga expressed concern over the data processing for the 1984 Census of Agriculture. He also said that every effort should be made to process the data in Cameroon.

The data processor has completed his evaluation, but was unable to conduct an exit interview with Mr. Kamga. During the exit interview with Madam Balepa a proposed program was presented for getting the census data processed and for developing the long term data processing capabilities within DEP. The attached proposal was developed by the evaluation team working with Director of Statistics staff and project staff during the past week.

The proposal satisfies the major portion of Mr. Kamga's requirement that the large part of the census data would be processed in Cameroon on the equipment in the Division of Statistics.

There are a number of issues that remain outstanding that I would like to address with this memo. I will also try to present the pros and cons of doing the census tabulation as we have proposed vs doing it all on a large main frame computer in country.

1. It must be accepted that:

- a. Computers do exist in DEP, Division of Statistics.
- b. The software will be operational by June 1, 1984.
- c. The computer and software will handle tabulation of the data for the 1984 census, but limited capacity of the hardware precludes tabulating all crosstabs of the data within the established time frame.

2. The proposal does not recommend that questionnaires leave Cameroon. Data will be handled in the following manner:
  - a. All questionnaires will remain in Cameroon.
  - b. Data from the area frame and the village frame will be entered on computer discs in the Division of Statistics.
  - c. Extreme operator data (50+ hectare or 300+ cattle) will not be entered on those discs. Therefore complete census data will not exist on these discs.
  - d. Three copies of the discs will be made by Division of Statistics.
    1. One for Division of Statistics Processing
    2. One for security
    3. One for processing of area and village samples crosstabs in the U.S.
3. The Division of Statistics will process the data as follows:
  - a. They will do all data entry
  - b. They will edit the data
  - c. They will enter clean data on discs.
  - d. They will process
    1. Direct expansion tables
    2. One way summary tables
    3. Limited crosstab tables
  - e. They will combine data from area, village and extreme operators samples.
  - f. They will publish the data.
- C.. The U.S. computer will do the balance of the crosstab tables for the area and villages samples only, and will provide backup processing as needed.

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D. Advantages and disadvantages of Proposed Plan:

Advantages

1. Utilize existing equipment in Division of Statistics.
2. Further develop and utilize software that has been designed and adapted to specific needs, which can later be transferred to a new machinery with more capacity.
3. Training of Division of Statistics data processing staff for future surveys and analyses.
4. All data is retained on an in-house computer for future analyses and studies.
5. Higher probability of meeting time schedule.
6. Probable overall lower cost for processing Census data, because it will be partially processed on DEP computer.

Disadvantages

1. Crosstabs tables for area and village samples are processed in U.S.
2. Long distance communications and travel of local personnel to U.S.

E. Advantages and disadvantages of using a mainframe computer in country.

Advantages

1. All data will be processed in country on one machine.
2. No data will leave country.
3. Closer liaison between users and processor

Disadvantages

1. The software package developed by SRS was for the NorthStar, therefore, new programs will have to be developed and/or existing programs have to be modified. (Mr. Snyder, Data Processing Specialist, estimated that this would take up to six months to complete.)

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2. Higher probability of not meeting time schedule, because of late start in software development.
3. Data will be less available for later analyses and studies and will be completely dependent on access to the same mainframe computer.
4. Division of Statistics data processing staff will not be trained.
5. Probability higher overall cost to the Government of Cameroon of census tabulation.

During the development of the proposed data processing plan, we tried to be objective and retain as much in country processing as possible. Mr. Kamga's desire to process the census data in-country is a very logical and rational position. However, the project is also concerned about the future development of the capability of processing annual survey data. The processing requirement will be about the same for these surveys as it is for the census. Therefore, we have concluded that this plan is in the best long term interest of the project and submit it for your consideration. Which ever way you decide, I would encourage a rapid decision as timing is very tight (if you decide to adopt our plan) and even tighter if you use the in-country mainframe computers.

Sincerely,



C. John Fliginger  
Evaluation Team Leader

February 14, 1984

DATA PROCESSING SUPPORT REQUIREMENTS AND  
TIMETABLE FOR THE 1984 AGRICULTURAL CENSUS

INTRODUCTION

As a result of the recent evaluation conducted on the Agricultural Management and Planning Project, several problems have been identified in the data processing support portion of the Project. These problems can be subdivided into four general areas -- computer hardware, computer hardware maintenance and repair, computer software, and support personnel available for conducting the Data Processing. The concerns in each of these areas are outlined briefly below:

1. Computer Hardware -- Since the Northstar microcomputers and peripheral equipment have been installed, numerous problems have been encountered. Currently both computers are operating. However, several components need to be repaired or replaced. An additional printer is needed, and the recently received uninterruptible power suppliers must be installed. Also several purchases need to be made including a spare floppy disk drive, repair manuals, etc.
2. Computer Repair -- At present, there are no computer repair facilities available for the Northstar in Cameroon. To bypass this problem, arrangements were made, via a personal services contract, to have Dr. Yankap Kwankum provide these services. To date, using this approach has been less than successful primarily because Dr. Kwankum has not been notified by the Director of the Data Processing Unit when hardware problems have occurred. Instead, in many instances the Director has attempted to correct these problems by "trading parts", etc. The Director has very little training or experience in computer maintenance.
3. Computer Software -- The software packages presently available for conducting/analyzing the 1984 Agricultural Census and related analyses were provided by SRS. They include the Survey Data Processing System (SUDS) and a batch processing system for entering, editing and analyzing the Census data. They also include several other "canned" programs such as Supercalc 2, Microstat and Wordstar to assist in conducting subsequent analyses to those required for the main Census effort. User manuals have been provided for the first two packages -- SUDS and the batch processing system -- but not for the last group of packages.

SUDS, which has been installed in several other countries by SRS, provides for questionnaire specification, data entry, data editing (as part of the data entry process) and direct expansion tables. The batch processing system provides for a more comprehensive edit ability, batch listing and two way tables (crosstabs). SUDS is functional but awkward to use on the current hardware configuration. The batch system does not at present work with SUDS because of some programming incompatibilities. In addition, this system seems to have been inadequately tested since "bugs" in the documentation and/or programming were found when attempting to use it. Finally, the production of two-way tables using the batch system is extremely slow. As a result, this system is inadequate for meeting the crosstabbing time frame of the Agricultural Census.

4. Personnel -- The original plans for the Agricultural Management and Planning Project did not call for developing a data processing capability within the Division of Statistics. This support was provided at a later point in the Project's life. As a result, no long term in-country data processing technical assistance has been provided under the project to date. In lieu of in-country support, arrangements were made to have SRS provide both software and hardware computer support on a "spot" basis. In addition, two Cameroonian personnel were sent for training at the MS level -- one in data processing and the second in software systems analysis. The first of these personnel completed his training in data processing and returned in 1983. The second is scheduled to complete his training in 1985.

Because of the "impromptu" approach to the development of data processing capability under the Project, present trained personnel levels in this area are inadequate. Although one person has been trained in data processing, he is not sufficiently experienced to maintain the present hardware or software. Nor is he likely to receive the necessary on-the-job training required when the technical assistance in this area is provided on a "spot" basis.

DATA COLLECTION TIMING, DATA PROCESSING PLAN AND MANDATED  
COMPLETION DATE FOR THE 1984 AGRICULTURAL CENSUS

When the Government of Cameroon provided funding for conducting the 1984 Agricultural Census it set a very tight time schedule for summarizing and printing the results. Under this mandate, the summarization of the Census data must be completed and published by July 1, 1985. In addition, present plans call for four rounds of data collection to be conducted under the Census over approximately 14 months period beginning on March 1, 1984. The timing, type of data to be collected and approximate workloads during each of these rounds are outlined below:

1. Data Collection Round 1 -- March 1, 1984 - May 15, 1984 (April 15, 1984 - July 1, 1984 in the three northern provinces); segment listing; 954 segments and approximately 200,000 farm and nonfarm households.
2. Data Collection Round 2 -- April 15, 1984 - June 15, 1984 (June 1, 1984 - August, 1984 in the three northern provinces); individual farm data: approximately 5,600 farms.
3. Data Collection Round 3 -- September 15, 1984 - November 15, 1984 (November 1, 1984 - January 1, 1984 in the three northern provinces); individual farm data; approximately 5,600 farms.
4. Data Collection Round 4 -- February 1, 1985 - April 1, 1984 (February 15, 1985 - April 15, 1985 in the three northern provinces); individual farm data ; approximately 5,600 farms.

Finally, present plans call for entering, editing, summarizing and publishing the results of each of the last three data collection rounds as they are completed. 1/ Tentative completion dates for these data compilation efforts are:

1. Round 2 Data - October 15, 1984
2. Round 3 Data - February 15, 1985
3. Round 4 Data - July 1, 1985

In order to meet each of these deadlines, very efficient questionnaire/training manual development and data collection/entry/edit/processing procedures will be required. Chart 1 outlines the projected time allowances which will be available for completing each step in this process during 1984/85. As can be seen from this chart, from two weeks to one month will be all the time available for data processing after each data collection round.

#### RECOMMENDED SOLUTIONS TO THE DATA PROCESSING PROBLEMS

In an effort to meet both the Census timing requirements just outlined as well as provide an adequate longterm data processing capability within the Division of statistics, two sets of solutions have been developed. The first of these sets is aimed at dealing with these problems in the shortrun in order to process the 1984 Agricultural Census (and possibly the 1985 Annual Agricultural Survey) data in a timely manner. The second set is aimed at providing adequate data processing capability within the Division of Statistics over the longrun. Each of these sets of solutions are outlined below.

- 1/ It is also planned to do this for the Round 1 data. However, this will be a separate data compilation effort and, as a result, is not outlined in this paper.

Shortrun solutions

1. Computer Hardware -- Two computer terminals, and one floppy disc drive must be repaired/replaced immediately. In addition, two power packs must be installed, and an additional printer as well as spare parts, repair and user's manuals, etc. must be purchased as quickly as possible. Dr. Yunkap Kwankum is presently installing the power packs. He will complete this installation by February 17, 1984. Mr. Joe Snyder, the systems analyst who evaluated the present computer system, has agreed to make the remaining purchases and arrange for the necessary repairs when he returns to the U.S. on February 14.

He will carry the components to be repaired with him. Repairs are to be completed by early March, 1984 and immediately mailed back to Cameroon. To provide backup to the present printer, either another printer of the same type as that installed or two similar printers with adequate capacity will be purchased, depending on comparable costs. Mr. Snyder has been given a personal services contract to perform these services and will return to Cameroon on May 1, 1984 and bring the printer(s) as accompanied baggage. All repaired new components will be installed by early May. (See attachment for parts/repairs required).

2. Computer Repair -- Dr. Kwankun will be given a contract to provide repair services for the Northstar computer during the Census period. He has agreed to do this. The Director of the Data Processing Unit will not be allowed to attempt any equipment repairs, "parts trading", etc. If difficulties occur in the equipment, he is to notify Dr. Kwankum immediately.
3. Computer Software -- As part of the personal services contract given Mr. Snyder, he has agreed to "debug", integrate and test the SUDS and batch processing system provided by SRS. This job is to be completed on or about April 15, 1984. He will return to Cameroon on May 1 for three weeks to one month to reinstall these programs. If, in the judgment of Mr. Snyder, he feels that the "debugged" programs are still inefficient for data entry/editing, he may develop a new program for this purpose.

The Northstar system will be used for entering and editing the Census data and for processing one-way tables only. Once the data are edited, they will be forwarded to the U.S. for processing on a mainline computer. A copy of the coding specifications, edit specifications, and the required crosstabs for the Census have been provided to Mr. Snyder. He has agreed to evaluate the time requirements and costs for programming and processing these crosstabs in the U.S. The Division of Statistics will forward to him a copy of the Round 2 training manual and

questionnaire by mid-March, 1984. Once an institution has been selected for processing the data, a complete set of all Census questionnaires and training manuals as well as the finalized cross tab requirements will be forwarded by August 1, 1984. At the time of data processing, a Project team member and possibly a Cameroonian counterpart will travel to the U.S. to assist in this effort.

4. Personnel -- During his May visit, Mr. Snyder will train the Director of the Data Processing Unit on the use of the "debugged" SRS programs (or a new program) for data entry, editing and one-way tabbing. In addition, one of the present technicians provided under the Project will assist the Director in the overall management of the data entry process.

#### Longrun Solutions

In the longrun, it is clear that additional hardware, technical assistance and training support will be required under the Project if the Division of Statistics is to develop adequate data processing capabilities. To meet these responsibilities it is recommended that:

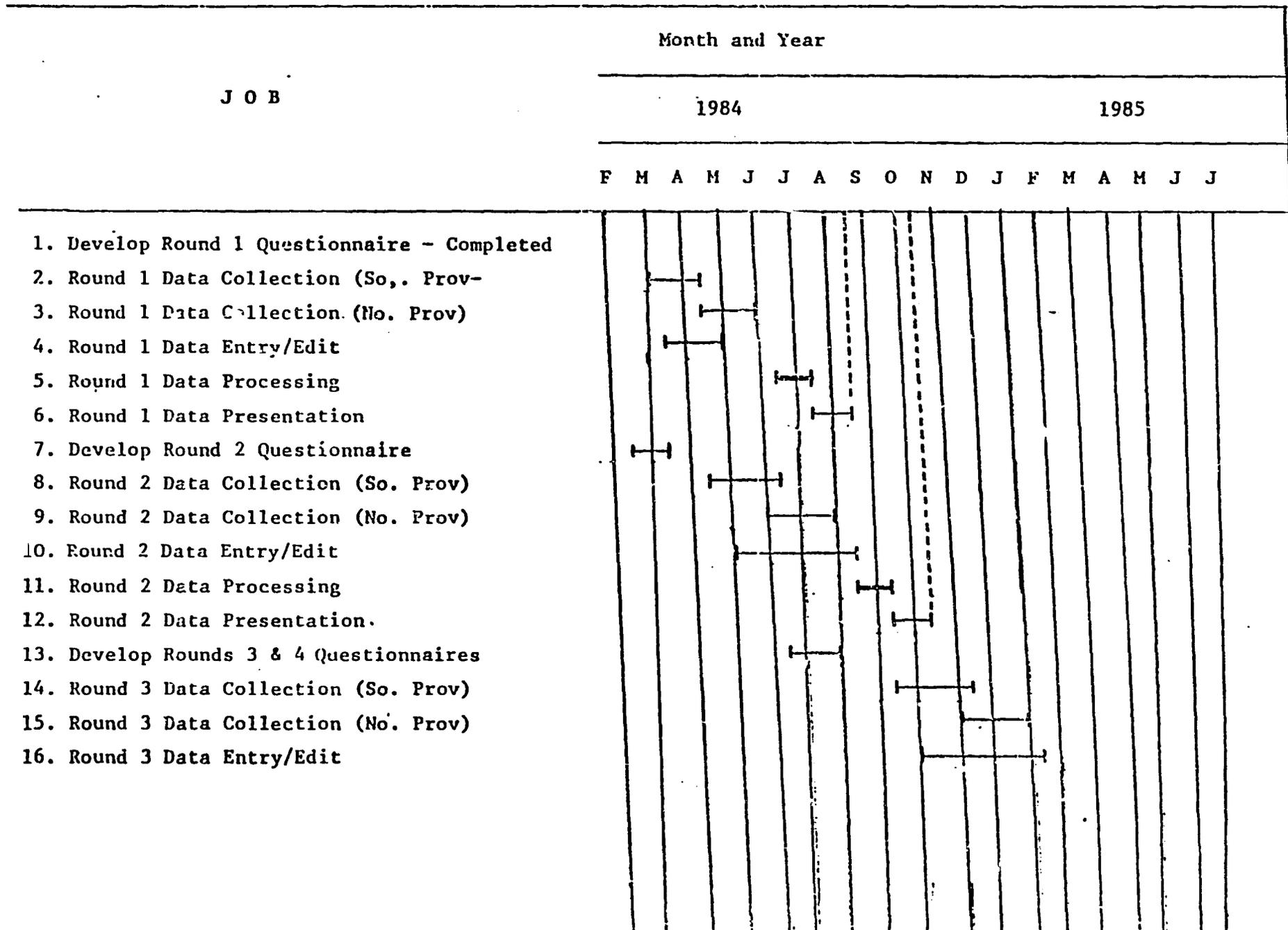
1. A new computer with greater capacity (say with three-quarters of a megabyte RAM space) be provided under the Project.
2. Longterm technical assistance in computer programming be provided in-country for two years under the Project.
3. The Project provide funds for training two Cameroonians in computer programming at the BS level at a U.S. University.

Providing this support will do much to allow the Data Processing Unit to meet its responsibilities in the future.



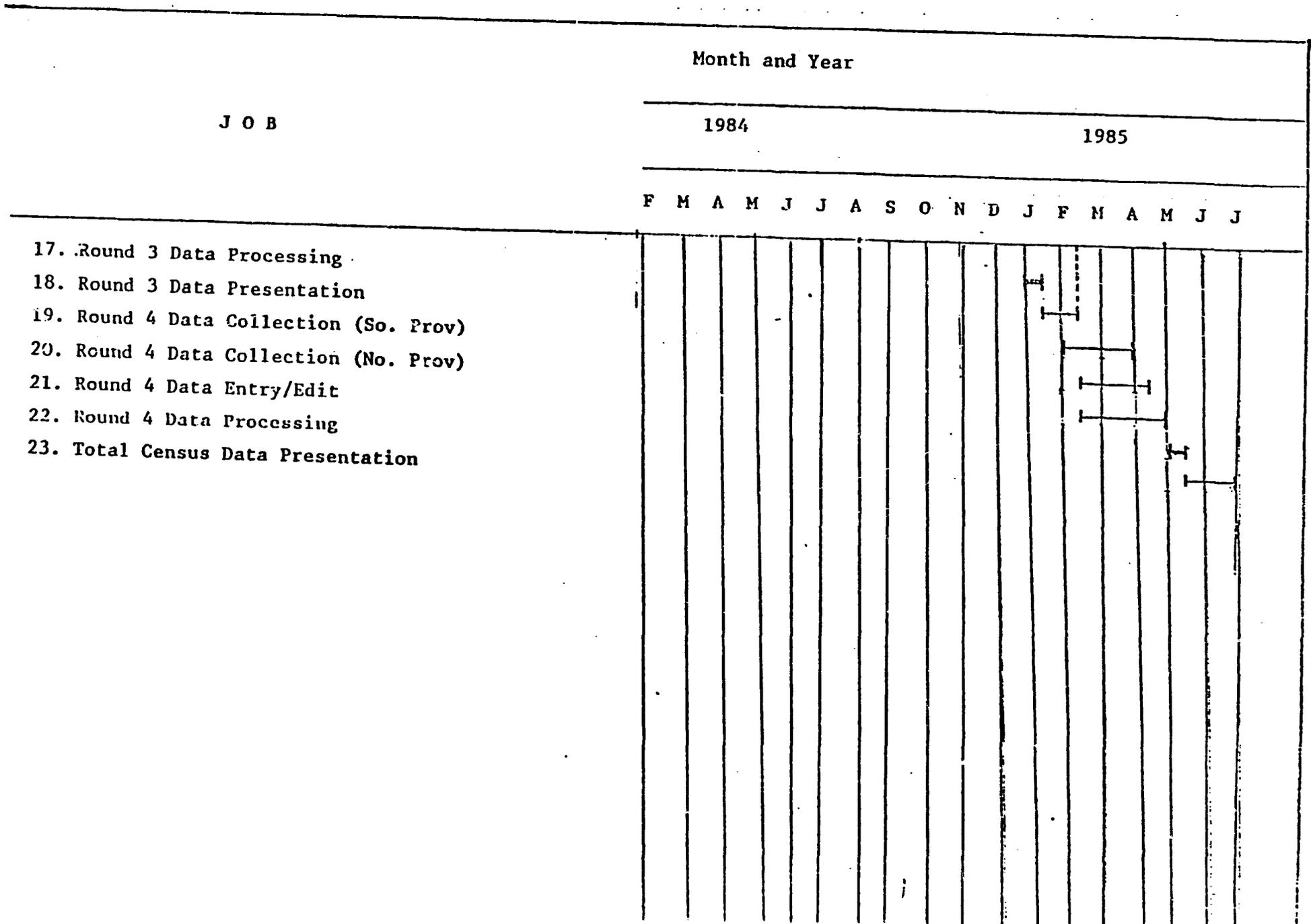
Drafter: Dr. John Litschauer:js, 2/15/84

Chart I: Project Timing for Completing the Questionnaire/Training Manual Development and Data Collection/Entry/Edit/Processing Procedures Under the 1984 Agricultural Census.



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Chart I: Projected Timing (cont.)



VI SPECIAL CONCERNS OF USAID/CAMEROON

A. What is the actual and appropriate role of the planning and policy unit within the Ministry of Agriculture?

Chapter V of the Presidential Decree, number 83/084 of February 15, 1983 reorganizes and establishes the role of DEP and its Divisions. That decree grants to DEP authority and responsibility as follows:

"CHAPTER V

Department of Studies and Projects

27.(1) Under the authority of a directory assisted by a deputy, the Department of Studies and Projects shall be responsible for:

gathering, processing and publishing statistics on the agricultural sector;

the technical and economic studies of the agricultural sector;

planning the agricultural sector;

identifying and preparing investment projects of the agricultural sector;

the technical, administrative and financial follow-up and the supervision of corporations and bodies under the supervisory authority of the ministry;

organizing training courses on agricultural statistics, studies, preparation, analysis and management of projects in conjunction with the Department of Agricultural Education.

(2) The Department of Studies and Projects shall comprise:

- the Agricultural Statistics Division;
- the Studies Division;
- the Projects Management Division;
- the General Affairs Bureau.

28.(1) Under the authority of a head of division, the Agricultural Statistics Division shall be responsible for:

- gathering and publishing agricultural statistics;
- preparing, carrying out and exploiting agricultural censuses;
- designing, carrying out and exploiting agricultural surveys;
- organizing training and refresher courses for agricultural statistics employees.

(2) The Agricultural Statistics Division shall comprise:

- the Agricultural Statistics Service;
- the Surveys Service.

29. (1) Under the authority of a service head assisted by a deputy, the Agricultural Statistics Service shall be responsible for:

- selecting and developing methods for gathering agricultural statistics;
- supervising and controlling the gathering of data in conjunction with the other services of the Ministry of Agriculture concerned;
- carrying out regular area yield surveys;
- processing of statistical data;
- preparing and publishing an agricultural statistics year book;
- drawing up and analysing the price trend of agricultural products;
- coordinating and providing training and refresher courses to agricultural statistics employees, in conjunction with other services concerned.

(2) It shall comprise:

- the Regular Surveys Bureau
- the Agricultural Product Prices Bureau

30. (1) Under the authority of a service head, assisted by a deputy, the Surveys Service shall be responsible for:

- agricultural censuses;
- agro-economic surveys;
- the management of the Cartography and Aerial Photographs Fund;

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- updating documentation relating to statistics and surveys;
- assisting in the training and retraining of agricultural statistics employees in conjunction with the other services concerned.

(2) It shall comprise:

- the Specific Surveys Bureau
- the Analysis Bureau

31. (1) Under the authority of a head of division, the Studies and Division shall be responsible for:

- general technical and economic studies in conjunction with the other services concerned;
- the planning of the agricultural sector;
- the identification and preparation of agricultural investment projects

(2) It shall comprise two Assistant Research Officers.

32. (1) Under the authority of a head of division, the Projects Management Division shall be responsible for:

- the follow-up and supervision of on-going projects;
- the technical and financial evaluation of these projects;
- assisting in the management of projects.

(2) It shall comprise two Assistant Research Officers."

The decree carries no specific reference to policy, but rather charges the Direction of Studies to conduct studies and carry out planning functions for the Agricultural Sector. Policy recommendations are formulated by the studies and planning activities, but actual determination of policies is done at a higher level.

Within the context of the above responsibilities, it is appropriate that the Division of Studies develop its analytical and planning skills to the maximum level possible. This will permit the utilization of improved statistics and studies for more precise and realistic planning, and ultimately improve the basis for policy formulation.

This project is directed toward the assisting and training of Division staff to carry out this mission. A number of concerns were raised during this evaluation that threaten the ability of the Division of Studies to actually carry out this mission. Those concerns focused on four primary

issues: that of communication by the Division with other Divisions within DEP, communication within the Division itself, the ability to plan work and studies which are directed toward a long term plan, and the ability to make a follow through on decisions. To some degree these problems are the result of reacting to pressure which present a longer term stable approach to analysis. High turnover of personnel is also reported to be a problem for the Division. A new Director, recently appointed to head the Division of Studies, indicated that the Division should be taking the leadership in developing a plan for analytical support of the planning function, and for developing data requirements and specifications for the Statistics Division.

B. What is the actual and appropriate role of the advisory team within the DEP, and in the policy analysis and planning function of the Ministry of Agriculture?

1. Agriculture Economist/Sector Planner (Chief of Party)

a. Project Paper Scope of Work:

i) As team leader, the economist/sector planner will have overall responsibility for assuring that the team is meeting the project objectives as well as have overall responsibility for project administration and reporting.

ii) He will act as the spokesman for the team in matters concerning the GRC, USAID and the team's home office in the United States.

iii) He will work to assure that the Ministry and Directorate personnel understand the purposes of the project so that they will be willing to extend their full support and cooperation.

iv) He will assist the other project technicians in establishing appropriate activities and procedures.

v) He will assist the agro-economic and statistical units of the Directorate in carrying out their planning functions by formulating the data and analytical requirements leading to a full agricultural sector assessment.

b. Actual Role:

Annex VIII is a summary of the Senior Economist/Project Leaders activities during the life of the project to date. It indicates that about two thirds of the activities carried out by the Senior Economist/Project Leader were devoted to administrative and management functions, and about one third devoted to professional economist activities. He has made a major contribution to the Statistics component of the project by insulating the statisticians from the administrative requirements of both AID and DEP.

This has allowed the statisticians to concentrate more of their time to frame construction, sample design and survey development.

The 1982 evaluation raises considerable question as to the role of both economists, and suggests that discussions be held between the Director of DEP, the Rural Development Division of USAID and the Chief of Party so as to come to some agreement regarding roles of the USDA advisors. The meetings resulted in revised work plans for all advisors. The work plan for the Senior Economist indicates that at least 50% of his time would be spent on administrative and management activities during 1982-83, in fact it worked out to about two thirds. The professional role of the Senior Economist during those years was primarily as a consultant to the Director of DEP and project and outside technicians. He participated in the development of some terms of reference and a limited amount of analysis as well. He also provided the leadership for a number of studies and project analyses.

The Chief of Party has assumed a role that places him in a position of being responsible for operations management, including local procurement, U.S. procurement, management of an advance account for all advisors, customs clearance, local transportation, warehousing, vehicle maintenance, participant and commodity documentation and much more. Most of these responsibilities should be absorbed by the project administrative assistant in conjunction with the project officer of USAID and/or the administrative support group of DEP.

The Senior Economist has been physically located in the Division of Statistics, thereby being able to better support the statistics effort, but effectively removing him from interchange with economists and the ability to assist in overall specification and prioritization of studies and analyses for planning purposes. It is recommended that he be located both physically and organizationally within the Division of Studies, with direct access to the Director of DEP.

c. Appropriate Role:

It is extremely important to the success of this project, that the management and administrative burdens on the Senior Economist be reduced by both USAID and DEP. The only administrative issues that should be handled by him are those of policy concerning the team itself. In addition to the team policy issues, which should require less than 10% of his time, the Senior Economist should be working with the Director of DEP, the Director of the Studies Division and the Director of Statistics in developing improved communication between and within those Divisions. He should also be assisting in the development of priorities for fulfilling the planning and analysis function of the Division of Studies and the specification of data requirements for analytical purposes. His assistance in analyses will help develop DEP analysts through the interchange of ideas and approaches to analysis.

## 2. Agriculture Economist/Marketing Analyst

### a. Project Paper Scope of Work:

i) The economist will assist the agro-economic unit of the Directorate in carrying out its functions of providing useful and reliable economic analysis to the Ministry of Agriculture.

ii) He will prepare subsectoral analyses in such areas as cash and food crops, marketing and export problems, the land tenure system, etc.

iii) He will be responsible for the training of staff of Cameroonian economists in the practical applications of economic analysis.

### b. Actual Role:

Annex VII contains a summary of the Marketing Economists activities during the life of the project to date.

The work plans of the Marketing Economist were also revised after work plans were also drawn up within DEP and more or less adhered to. Therefore, her own work plans coincided with the overall plan of DEP. She was heavily involved in analytical work during the first two years of the project and during the third made a rather sharp shift to project design, monitoring and evaluation.

### c. Appropriate Role:

It must be noted that the scope of work in the PP specifies that the marketing economist be responsible for various types of economic analysis only. It does not carry responsibility for project design. Nor do the project outputs in the PP recognize project design.

The project was built on the premiss that statistical and analytical skills were needed in DEP. Therefore, the marketing analyst should be working with local economists in carrying out analysis in the field of marketing of agricultural products.

The Marketing Economist has also assumed the responsibility of training officer and advisor to the documentation center. These activities appear appropriate if they do not take away too much time for development of analytical skills within the DEP.

## 3. Field Survey Statistician

### a. Project Paper Scope of Work:

i) The Field Survey Statistician will advise the Directorate on the best means to maximize the usefulness of field staff (enumerators, etc.) in its research and studies activities.

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ii) He will establish a functioning documentation center accessible to and serving the needs of the Directorate, the Ministry of Agriculture, and the interested public.

iii) He will have overall responsibility for the in-country, third country and U.S. training of Cameroon nationals at the Directorate.

b. Actual Role: (see Work Plan, page 63)

The survey design statistician is advising and assisting in a much more specific and broader range of activities than is indicated in the PP scope of work. Responsibilities for the Documentation Center and training were transferred to the Marketing Economist.

It is difficult to separate completely the activities of the Survey and Sampling statistician, in that much of their work overlaps and each can move from one side to the other. However, the Survey Statistician is providing assistance and advice in the following areas.

- i) Development of field testing of questionnaires.
- ii) Design and field testing of supervisory and enumerator manuals.
- iii) Development of training materials and programs for field supervisors and enumerators.
- iv) Assisting and supervising training schools.
- v) Develop quality control procedures for supervisors and enumerators.
- vi) Monitor field surveys for quality of data and enumeration.
- vii) Train and assist counterparts.
- viii) Provide consultation on special studies.
- ix) Assist with management of data through processing tabulation and publication

c. The actual role as described above in section b is appropriate, however, the role of the survey statistician should be broadened to include economic analyses. He is very close to the data on the statistics side and with his economic analysis skills could provide a key link in bringing statistics and economic analyses together.

#### 4. Senior Statistician/Survey Design

a. Project Paper Scope of Work:

i) The statistician will assist the Agricultural Statistics unit of the Directorate in carrying out its data gathering functions by reviewing the methodology and recommending procedural improvements.

ii) He will assist in the preparation of an agricultural statistics handbook.

iii) He will develop a reliable and accurate system of deriving annual crop production estimates and marketing/price statistics useful to the agro-economic and the studies and project units of the Directorate.

iv) He will advise the Directorate on the utilization of the data processing facilities at their disposal.

v) He will be responsible for the training of a staff of Cameroonian enumerators, statisticians and data analysts in statistical techniques.

b. Actual Role: (see Work Plan, page 59)

The actual role of the Sampling Statistician is closely related to that described in the project paper, a more detailed description of his activities follows:

i) Develop and test specifications and procedures for frame construction.

ii) Supervise frame construction.

iii) Develop and test specifications and design of agricultural and census samples.

iv) Design samples for special studies

v) Develop data specifications for questionnaire design.

xi) Advise and consult on sampling techniques for outside studies.

c. This role is appropriate and necessary for the success of the project.

#### C. Assess the Productivity of the U.S. Advisors

Productivity of all advisors has been limited for various reasons. In the case of the Senior Economist the heavy burden of administrative and management functions severely limited the time he could devote to analysis as such. However he made significant contributions to the statistics by absorbing the many of the management functions in support of the Statistical component. Analysis was also limited by the fact that data from the annual surveys and the census were not forthcoming as projected. He thus participated and provided leadership in a number of analyses, project designs, and policy papers as well as consulting on the reorganization of DEP.

The Marketing Economist has been more deeply involved in analysis itself and has, in collaboration with counterparts and consultants, produced a number of significant reports, feasibility studies and other papers. She has worked closely with DEP staff and has been able to exchange ideas, discuss techniques and in general provide training to counterparts. Frequent changes in counterparts has limited her ability to "institutionalize" her contribution in economic analysis.

Productivity of the Statistician was very limited during the early stages of the project because the Host Country had not decided whether or not to start with development of annual surveys or with a census. This decision was not finalized until the Census decree was issued on Oct. 11, 1982. Prior to the decision, the statistician developed and tested frame sample and survey concepts. However, after the decision was made, productivity increased sharply in all areas of their work and the frame, sample and survey materials were all developed within a very short period of time.

#### D. Relationships between U.S., IBRD, and FAC advisors

During their initial stages of the project, it appears that there was considerable interchange and collaboration between the advisors. However indications are that all of the advisors had, and to some degree still have, role definition problems. True collaboration between the three Teams is virtually non-existent. However there is collaboration between the marketing economist and the IBRD advisors.

#### E. Assess the Impact of the Advisors on the Statistics and Economic Analysis Capability of DEP

The impact of US economic advisors on the capability of DEP, in terms of analysis, has been within the context of working with and training counterparts, and producing several papers and analytical reports from

secondary and limited primary data sources. High turnover rates in counterpart personnel has limited the ability to institutionalize analysis procedures, as has the minimal availability of primary data.

The impact of the US statistical advisors is more visible as the effort is highly structured with very specific outputs identified. The construction of an area frame not only trained DEP statisticians, it also established a permanent frame in Cameroon which can be used in sampling for many purposes for many years. Sample design activities have also trained DEP statisticians in the use of the frame for sampling purposes and the development and testing of survey procedures has taken counterparts through the difficult and complicated process of preparing for a survey. Actual conduct of a survey and analysis of that data is still to be achieved.

## VII. GENERAL CONCLUSIONS AND SUMMARY OF RECOMMENDATIONS

### A. General Conclusions

Evaluation of this project was somewhat difficult in that the project goal and purpose both emphasize project design, implementation, and evaluation, whereas the project description, inputs, outputs and work plan focus on statistical and economic analysis activities. The evaluation team has concluded, in view of both documents and of the strong emphasis on statistics, that the main intent of the project was to develop a statistical and economic analysis capability which in turn, would serve to strengthen planning proposals, policy papers, feasibility studies, and project identification and evaluation. It is with this interpretation that we make recommendations for future implementation of the project.

The statistical activities of the project started slowly, but accelerated at an extremely fast rate during 1983. Although it is impossible to attain the statistical goals within the timeframe of the current PACD, the basic elements of the project are now in place and a high probability of success exists, if time and means to implement current plans are granted.

The success of the statistical component will strengthen the economic analysis side of the project by providing the analysts with data on which to base sector, subsector and project feasibility studies. It will also give them an expanded means for conducting special studies and in seeking specialized data.

For these reasons we recommend that the project be extended until June 30, 1987, and that the proposed overall work plan and the statistics work plan be implemented. These work plans are contained on pages 59 and 60. This extension and implementation of these plans will accomplish major steps in achieving the goals of this project. It will permit the completion of the 1984 Agricultural Census, the conduct of a series of subsector studies based on census data, and the conduct of an Agricultural Sector Review, all of which will support analysis, planning and preparation of the Sixth Five Year Plan.

The extension and work plan will also permit the project to complete two rounds of annual Agricultural Surveys as well as a series of Special studies that will be identified in the sector review and during the preparation of the Fifth Plan.

The evaluation team anticipates that the advent of improved statistics will result in an increasing demand for economic analysis to support the planning function of DEP. During the next year or so, analysis will begin slowly, but by late 1985 should prove itself to be a valuable approach to planning. If such occurs, consideration should be given to expanding or intensifying the analysis capability of both the project and DEP. If it does not occur there is no real point of continuing the project beyond June 1987. By this date the statistical capability of DEP should be able to continue with little or no outside help. Therefore, we recommend that another evaluation be conducted in late 1985 in order to determine if the project objectives are being met, to determine the need for future analytical needs and to determine the status of the statistical capability.

## B. Summary of Recommendations

### General

1. That the project be extended until June 30, 1987.
2. That the project be focused on the statistics and the economic analysis elements, and that the project goal and purpose be revised to reflect this focus.
3. That the mix of technical assistance be revised to included:
  - a) One senior level agricultural economist whose academic and experience background is strong in analysis.  
(through June 30, 1987)
  - b) One Economist/Statistician who has experience in working in both statistics and economics.  
(through June 30, 1987)
  - c) One data processor specialist or computer programmer.  
(through June 30, 1987)
  - d) One Sampling Statistician experience in agricultural data collection systems.  
(through June 30, 1987)
  - e) One Admin Assistant.
  - f) A minimum of 20 man-months of short term assistance for a variety of specialists, primarily in economics and data processing.

4. That future training includes the following:
  - a. two MS level economists
  - b. two MS level statisticians
  - c. two BS level data processors.
5. That USAID commodity inputs include an upgraded computer and 4 replacement field vehicles for advisors.
6. That GRC inputs include sufficient and timely budget for annual surveys beginning in 1985 and a vehicle replacement program.
7. That the Implementation plan and logframe be revised to more accurately reflect the projects activities.
8. That a joint USAID/MINAG/MINPI committee review project activities at least every six months, in order to follow up on progress, identify problems and offer support to the project.
9. To conduct an evaluation in late 1985 or early 1986 to determine progress and future needs in achieving project goals.

Statistics

1. Resident Statistics Advisors: The project is fortunate to have two well-qualified statistical advisors with strong commitments to the project. They provide leadership, technical expertise, and working relationships which give the project a high probability of success. They have been here for relatively short periods of time and their continuation is vital. The lack of French language proficiency prevents them from communicating fully, however, and an increased emphasis in further language training is recommended.

2. The Agricultural Census: The 1984 Ag Census has supplanted the annual agricultural survey as the primary focus of statistical responsibility within the project. There is no doubt that performance on the Ag Census will be taken as a demonstration of the ability of the Division of Statistics to function as a data collection and analysis agency for the Ministry of Agriculture. It has, however, resulted in emphasizing short run problems rather than building a long run capability. The long term commitment by the GURC to a continuing program of annual surveys may need to be further emphasized.

3. Area and List Frame Construction: The primary emphasis on frame construction has been placed, appropriately, on the area frame. This has been completed and provides an adequate frame for both the Ag Census and for annual surveys. The segments are larger than might be desired but are justified on the grounds of lack of suitable natural boundaries for smaller segments. Refinements can be added to improve the frame, but it is clear that it is useable in its present form. Sample segments should be rotated on a regular basis each year, replacing 20-25% of the segments each year. A list frame is to be developed to cover all farms with more than 50 hectares. This multiple frame approach is appropriate if a satisfactory list frame can be developed.

4. Training: Out-of-country training has already proven valuable for members of the Division of Statistics but more is needed. At least two additional students should be sent for MS level training in statistics. Unfortunately the Ag Census may prevent their leaving prior to 1985, but training should start as soon as possible. Even more vital is training in computer programming and data processing Training is needed for two or more students at the BS level. On-the-job training has been satisfactory for parts of the statistics program but is almost completely missing in data processing. Technical assistance in this area is crucial to the success of the project.

5. Data Quality: Considerable effort has been expended to assure quality in the data collected. Methods which have been used include development of enumerator manuals, training schools, use of a Pilot Survey, meetings with controllers and departmental and provincial supervisors, development and practice with editing procedures, and checking of procedures in the field. It requires and warrants this attention if the data are to be reliable and estimates are to be meaningful. Because of this effort, the Ag Census should provide good data.

6. Objective Yield Measurements: Because of a concern by provincial supervisors that accurate data are not always being collected by asking farmers for their yield and sale of crops, a proposal has been made to collect data on yield from a sample of plots in selected field. Such methods have been used a number of places, usually for forecasting rather than estimating yields, and can be quite useful if techniques are fully worked out and if a large enough sample is taken. Until these conditions are adequately satisfied, however, it would be premature to go into the field with these methods without also collecting data directly from the farmer. It would be reasonable, though, to test the objective yield procedure on a few crops.

#### Economics

1. That a series of subsector studies be carried out, in 1985, leading to a sector review in early 1986 in order to serve as an input into the Sixth Plan.

2. Develop plan for, and carry out special studies identified and prioritized during the subsector studies, sector review and preparation of the Sixth Plan.

3. Improve long range planning for economic analyses within the Division of Studies..

4. That two additional MS level participants be trained in Agricultural Economics and Economic Analysis.

5. That In-Country seminars be given between Statistics and Economics Divisions to provide information and improve communication.

6. That long range assignments of advisor and counterpart staff be encouraged.

7. That no new level of assistance be included for the documentation center.

8. The Division of Studies staff be expanded and upgraded, especially in economic analysis.

9. The Economic Advisors on the project have accomplished a great deal under some very difficult conditions. They have pretty much had to find their own level of input and have, with very limited data, produced some in-depth studies. The senior economist made a large impact on the development of the statistics component by assuming the administrative and management burdens of the statisticians so they could concentrate to a greater degree on development of the frame, sample and survey materials. In view of census and annual survey data becoming available it is suggested that concentration of the economists' activities be focused on economic analysis in the future, and that the administrative burdens be reduced. Both advisors speak very good French and have development rapport with their colleagues.

#### Data Processing

1. That the computer and software be "exercised" on a regular basis to develop skills and confidence in the system.

2. That a maintenance person be contracted to maintain hardware.

3. That only the maintenance person should open or work on the hardware.

4. That faulty equipment be repaired as rapidly as possible and that additional parts be acquired.

5. That the 2 software systems be tested, fixed and installed as quickly as possible.

6. Provide resident technical assistance in data processing and programming.

7. Develop a backup system for tabulation of the Census data.

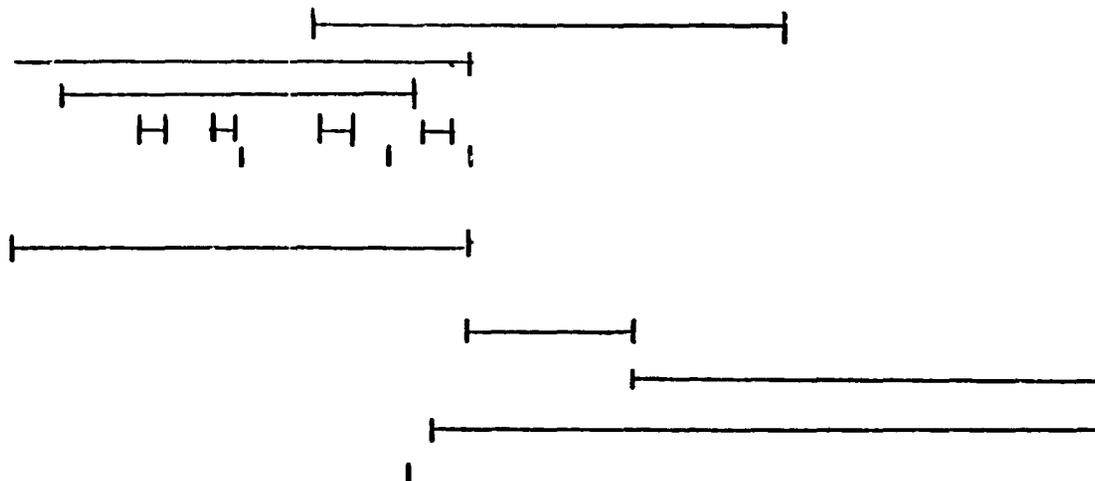
20

PROPOSED GENERAL IMPLEMENTATION WORK PLAN

ACTIVITIES

1984	1985	1986	1987
J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J

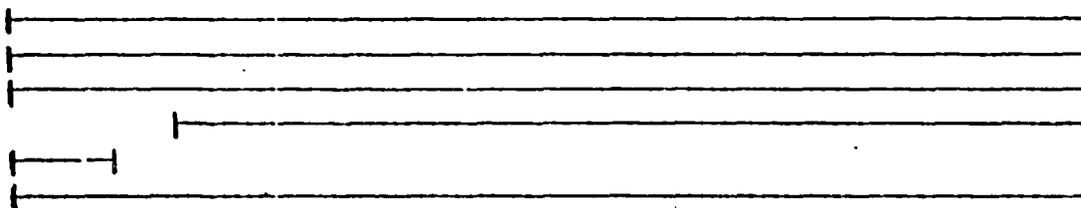
1. 6th Plan
2. Ag. Census
3. Field Survey Ag. Census
4. Data summarized Ag. Census
5. Data Published Ag. Census
6. Conduct subsector studies and)  
develop data Spect, TOR )  
output tables, plans for )  
sector review. )
7. Sector Review
8. Special Subsector and Project Studies
9. Annual Surveys
10. PACD



9.

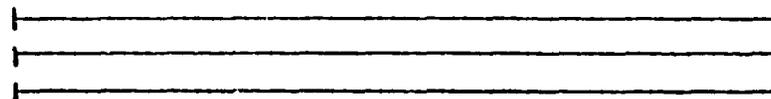
Technican Assistance.

13. Senior Ag. Economist
14. Econ/Statistician
15. Math/Sampling Stat.
16. Programmer/Data Prac.
17. Marketing Econ
18. Admin Assist



Training

18. Ag. Econ 2 MS
19. Ag. Stat 2 MS
20. Programming 2 Bach.



51



## Changes Recommended by Evaluation Team

## LOGICAL FRAMEWORK

Life of Project:

From FY \_\_\_\_\_ to FY \_\_\_\_\_

Total U.S. Funding \_\_\_\_\_

Date Prepared: 2/23/84Project Title Number: CAMEROON AGRICULTURAL MANAGEMENT AND PLANNING (631-0008)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	METHODS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>That the Project Goal be <u>changed</u> to the following:</p> <p>"To assist in improving Cameroon's ability to develop and execute agricultural and Rural development programs which benefit the rural majority".</p>	<ol style="list-style-type: none"> <li>1. Per capita rural incomes increase</li> <li>2. Quality of life index improves</li> <li>3. Rural/Urban migration : 1.1. stabilizes</li> </ol>	<ol style="list-style-type: none"> <li>1. GRC national accounts</li> <li>2. CDC reports</li> <li>3. Social science studies (ONAREST, FNSA)</li> </ol>	<p>Magnitude and quality of resources required to effectively impact on rural poverty are mobilized</p>
<p>That this Project Purpose be <u>changed</u> to the following:</p> <p>To strengthen and institutionalize fully functioning statistics and economic study units, capable of providing sound economic analysis which the MOA can rely on for planning and policy purposes</p>	<ol style="list-style-type: none"> <li>1. Trained and functioning cadre of Cameroonian economists and planners who will have produced and who will be capable of producing on a regular basis;</li> <li>2. an agricultural sector review and requisite sub-sector analyses;</li> <li>3. policy papers and planning proposals;</li> <li>4. new project feasibility studies;</li> <li>5. an annual statistical summary;</li> <li>6. a series of annual statistical reports of current estimates of average, production inventories and other economic data.</li> </ol>	<p>Site visits, USAID and MOA records and reports.</p>	<p>Planning unit is able to influence activities of MOA and MINPLAN. Participants return in timely fashion. MOA continues budgetary support</p>
<p><u>Outputs:</u></p> <ol style="list-style-type: none"> <li>1. Area Sampling Frame</li> <li>2. Area Sample (Agr.)               <ol style="list-style-type: none"> <li>a. For Census</li> <li>b. For Annual Surveys</li> </ol> </li> <li>3. Agricultural Census</li> <li>4. Annual Agricultural Surveys</li> </ol>	<ol style="list-style-type: none"> <li>1. One-permanent</li> <li>2. a. One               <ol style="list-style-type: none"> <li>b. One</li> </ol> </li> <li>3. One (1984)</li> <li>4. Three per year (beginning 1985)</li> <li>5. Two per year (beginning 1985)</li> <li>6. One per year</li> </ol>	<ol style="list-style-type: none"> <li>1. Observation</li> <li>2. Observation</li> <li>3. Publications</li> <li>4. Publications</li> <li>5. Publications</li> <li>6. Publications</li> <li>7. Publications</li> </ol>	<p>Assumptions</p> <ol style="list-style-type: none"> <li>1. Adequate and Timely Inputs.</li> <li>2. Staffing level is maintained in Div. Stat. and increased in Div. Studies</li> <li>3. Planning, organizational and management support from DEP and USAID</li> </ol>

Changes Recommended by Evaluation Team

LOGICAL FRAMEWORK

Life of Project:  
From FY \_\_\_\_\_ to FY \_\_\_\_\_  
Total U.S. Funding \_\_\_\_\_  
Date Prepared: \_\_\_\_\_

Project Title Number: CAMEROON AGRICULTURAL MANAGEMENT AND PLANNING (631-0008)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	WAYS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>5. Publications of crop, livestock price and other Agr. data</p> <p>6. Annual Statistical Summary (Handbook)</p> <p>7. Subsector Reviews</p> <p>8. Agric. Sector Review</p> <p>9. Special Studies</p> <p>10. Data Processing Capability</p> <p>11. Trained staff</p> <p>    a. MS level</p> <p>    b. OJT and In-Country Training Schools.</p>	<p>7. 4-8 (1984-1985)</p> <p>8. One 1985- Prior to preparation 6th 5yr Plan</p> <p>9. 4-8 (1986-89)</p> <p>10. Staff, hardware, and software capable of supporting statistics and economic analysis</p> <p>11. a. Eleven MS</p> <p>    b. Central - 36</p> <p>    Field Supervisor - 66</p> <p>    Field Enumerators - 155</p> <p>    Temporal - 108</p>	<p>8. Publications</p> <p>9. Publications</p> <p>10. Observation and processing records.</p> <p>11. USAID/GRC Records</p>	
<p><u>Inputs</u></p> <p><u>USAID</u> <u>Mchs</u></p> <p>Sr. Agricultural Economist (Analyst/Planner) 81PM</p> <p>Ag. Economist/Survey Statistician 80PM</p> <p>Ag. Economist-Marketing Sampling Statistician 43PM</p> <p>Programmer/Data Processing 64PM</p> <p>38</p> <p>Total Resident TA 296PM</p> <p>Short Term TA 50PM</p> <p>Admin assit. 84PM</p>	<p>Commodities</p> <p>1. Upgraded computer</p> <p>2. 3 advisor Bush vehicles</p> <p>    1 advisor town vehicle</p> <p>3. Advisor vehicle maintenance and operation</p>	<p>GRC/MOA</p> <p>1. DEP Staff</p> <p>2. Field vehicle depreciation and replacements</p> <p>3. Vehicle maintenance and operation</p> <p>4. Office space, equip and supplies.</p> <p>5. Field equipment, and supplies</p>	

**A N N E X I**  
**SCOPES OF WORK FOR EVALUATORS**

Contract No. 631-0008-S-00-4006-00

ARTICLE I - STATEMENT OF DUTIES

A. Objectives:

The purpose of this contract is to obtain services of Mr. John Fliginger, an Agricultural Economist, to conduct a formative evaluation of the Agriculture Management and Planning Project 631-0008.

B. Scope of Work

1. Contractor shall review the project paper, technicians' reports, Project Officer's reports, and other documents that detail project progress to improve the Division of Studies and Projects (DEP) capability in the following areas:
  - a) the production of an agricultural statistics handbook, a compendium of crop production, yield, price and other available time series data; rainfall and temperature data; governmental organization in the rural sector, and a listing of agro-business developmental society projects.
  - b) the generation of improved data and more efficient production of the "Agricultural Statistics Yearbook" containing crop yield, acreage, production of marketing/price data needed for sectoral and/or crop specific analyses and forecasting.
  - c) the development of the National Agricultural Census.
2. After completing the review of the above documents, the completion of interviews with USAID, DEP personnel and visits to field to assess sampling work, Contractor will make a judgement of the effectiveness of the project.
3. As team leader and member of the evaluation team to:
  - a) assess progress to date in the achievement of the institution building objective, in-country, third country and U.S. short-term and long-term training in following disciplines: forecasting, project planning and analysis, financial management of project, project implementation, agriculture policy, data collection, computer training, etc.;
  - b) check whether the delivery of project inputs both by USAID and GURC (vehicles and equipment, space, technical assistance, counterparts) has been made on a timely basis;
  - c) determine whether assumption of project, and its logical framework are still valid, and whether project activities, as currently undertaken, will lead to project objectives; whether project objectives should be changed.

# TELEGRAM

INDICATE  
 COLLECT  
 CHARGE TO USAID

	FROM AMEMBASSY YAOUNDE	CLASSIFICATION UNCLASSIFIED	0152
12356	N/A	P 061446Z JAN 84	
E.O. 12812	N/A		
TAGS:	PASA AG/CAM 0008-1-80, RECRUITMENT OF DATA PROCESSING SYSTEMS SPECIALIST		
SUBJECT:	SECSTATE WASHDC <u>PRIORITY</u>		
ACTION:	UNCLAS YAOUNDE <u>0152</u>		
	FOR: USDA/OICD PASS TO A.J. DYE		
	REF: YAOUNDE 83 10081		
	<p>1. BEGINNING IN JANUARY, 1984, A PROJECT EVALUATION IS TO BE CONDUCTED ON THE AGRICULTURAL MANAGEMENT AND PLANNING PROJECT. THE EVALUATION TEAM WILL CONSIST OF THREE MEMBERS -- AN AGRICULTURAL ECONOMIST (WHO WILL ALSO BE RESPONSIBLE FOR LEADING THE EVALUATION AS WELL AS DRAFTING THE FINAL EVALUATION REPORT), A STATISTICIAN AND COMPUTER SYSTEMS ANALYST. THE TERMS OF REFERENCE (TOR) FOR THE FIRST TWO POSITIONS ON THIS EVALUATION TEAM -- THE AGRICULTURAL ECONOMIST AND THE STATISTICIAN -- HAVE ALREADY BEEN COMPLETED AS PART OF THE PIO FOR THE EVALUATION EXERCISE. TERMS OF REFERENCE FOR THE COMPUTER SYSTEMS ANALYST ARE OUTLINED BELOW TO COMPLEMENT THOSE PROVIDED IN REF. A.</p> <p>A. OBJECTIVE: THE OBJECTIVE OF THE PROJECT IS TO IMPROVE CAMEROON'S ABILITY TO PROCESS AGRICULTURAL DATA, BOTH ON AN ONGOING AND A SPECIAL STUDIES BASIS, WITHIN THE DIVISION OF STATISTICS, MINISTRY OF AGRICULTURE.</p>		

AID  
DCM  
INFO  
CHRON

DRAFTED BY ARD/PASA: JSCHAMPEL:js	DRAFTING DATE 1/5/84	TEL. EXT. 357	CONTENTS AND CLASSIFICATION APPROVED BY: DIR: RONALD D. LEVIN
--------------------------------------	-------------------------	------------------	------------------------------------------------------------------

CLEARANCES:  
ARD: MNGUE  
ARD: WLITWILLER  
PDE: (info)

*Handwritten initials and signatures:*  
AK  
SAR  
RF  
4

UNCLASSIFIED  
CLASSIFICATION

OPTIONAL FORM 10  
MAY 1962 EDITION  
GSA GEN. REG. NO. 27

B. SCOPE OF WORK: TO ASSESS, BASED ON A REVIEW OF PROJECT PAPERS, TECHNICIANS' REPORTS COMPUTER HARDWARE/SOFTWARE SUPPORT AND COMPUTER TRAINING SUPPORT PROVIDED UNDER THE PROJECT TO DATE, THE CAPABILITY OF THE DATA PROCESSING UNIT TO:

- a) MEET THE 1984 AGRICULTURAL CENSUS DATA PROCESSING NEEDS ON A TIMELY BASIS;
- b) PROVIDE ADEQUATE SUPPORT IN THE DATA PROCESSING AREA FOR FUTURE PLANNED ANNUAL AGRICULTURAL SURVEYS; AND
- c) PROVIDE ADEQUATE SUPPORT IN CONDUCTING SPECIAL AGRICULTURAL STUDIES UTILIZING STATISTICAL/ QUANTITATIVE METHOD TECHNIQUES SUCH AS MULTIPLE REGRESSION, LINEAR PROGRAMMING, TRANSPORTATION MODELS, ETC.

2. AS A MEMBER OF THE EVALUATION TEAM TO:

- a) EVALUATE THE PRESENT HARDWARE INCLUDING ITS ADEQUACY OF PROCESSING CAPABILITY BOTH CURRENTLY AND UNDER IDEAL CONDITIONS;
- b) EVALUATE THE EFFICIENCY OF THE SOFTWARE PACKAGES PROVIDED UNDER THE PROJECT IN TERMS OF PROCESSING TIME REQUIREMENTS; AND
- c) EVALUATE THE ADEQUACY OF PRESENT PERSONNEL WITHIN THE DATA PROCESSING UNIT IN TERMS OF PROVIDING ACCEPTABLE DATA PROCESSING SUPPORT.
- d) ADVISE CONCERNING SHORT RUN AND LONG RUN SOLUTIONS TO CONSTRAINTS POSED TO THE STATISTICS DIVISION BY DATA PROCESSING.

BASED ON THIS EVALUATION, THE COMPUTER SYSTEMS ANALYSIS WILL ADVISE THE EVALUATION TEAM AS TO FUTURE NEEDS OF THE DATA PROCESSING UNIT INCLUDING PERSONNEL, TRAINING, SOFTWARE AND EQUIPMENT REQUIREMENTS.

3. PLEASE CONTACT DR. LYLE CALVIN, OREGON STATE UNIVERSITY (OSU) IN REGARD TO THE PERSON TO BE SELECTED AND THE TIMING OF DATA PROCESSING SYSTEM SPECIALIST TDY IN CAMEROON. MISSION UNDERSTAND THAT THE HEAD OF THE COMPUTER SCIENCE DEPT. OF OSU MAY BE AVAILABLE FOR THIS ASSIGNMENT. IF HE IS AVAILABLE IN LATE JANUARY AND EARLY FEBRUARY MISSION CONCURS IN THIS ASSIGNMENT.
4. PLEASE RESPOND BY PRIORITY CABLE <sup>OR</sup> ACTION YOU HAVE TAKEN ON THIS REQUEST.

FRECHETTE



Contract No. 631-0008-S-00-4006-00

d) determine whether objectively verifiable indicators of project objectives are still valid and can be utilized to measure project progress. If not, new indicators should be developed to enable the Mission to measure project progress.

C. Required Reports:

1. Contractor will prepare final report in English which summarizes progress in the achievement of project goal as spelled out in the Project Paper and the Project Agreement. This report shall present judgements as to whether the purposes should be modified to reflect current realities, whether there should be major changes in types or quantities of project inputs, and whether GURC is providing sufficient support to this project, as well as collateral activities to assure success. The report will also make recommendation and justification regarding continuation and/or extension of the project.
2. In addition to presenting the team findings in regard to the activities included in the scope of work, the final report will address the following concerns of USAID/Cameroon:
  - (a) What is the the actual and appropriate role of the planning and policy unit within the Ministry of Agriculture?
  - (b) What is the actual and appropriate role of the advisory team within the DEP and in the policy analysis and planning function of the MINAGRI;
  - (c) Assess productivity of the U,S, advisors.
  - (d) Relationship between the U.S., IBRD and FAC advisors.
  - (e) Assess the impact of the advisor on statistics and economic analysis capability of DEP.
3. Contractor will be responsible for the preparation of the final team report in English and submit it to the USAID/Cameroon PDE prior to Contractor's departure from Cameroon.

ARTICLE II - PERIOD OF SERVICE OVERSEAS

- A The contract period commences on January 4, 1984 and the estimated completion date is March 2, 1984.
- B. Contractor will work under the supervision of the USAID PDE Officer or his appointed designee.

Contract No. 631-0008-S-00-4008-00

ARTICLE I - STATEMENT OF DUTIES

A. Objectives:

The purpose of this contract is to obtain services of Mr. Lyle Calvin, an Agricultural Statistician, to conduct a formative evaluation of the Agriculture Management and Planning Project 631-0008.

B. Scope of Work

1. Contractor shall review the project paper, technicians' reports, Project Officer's reports, and other documents that detail project progress to improve the Division of Studies and Projects (DEP) capability in the following areas:
  - a) the production of an agricultural statistics handbook, a compendium of crop production, yield, price and other available time series data; rainfall and temperature data; governmental organization in the rural sector, and a listing of agro-business developmental society projects.
  - b) the generation of improved data and more efficient production of the "Agricultural Statistics Yearbook" containing crop yield, acreage, production of marketing/price data needed for sectoral and/or crop specific analyses and forecasting.
  - c) the development of the National Agricultural Census.
2. After completing the review of the above documents, the completion of interviews with USAID, DEP personnel and visits to field to assess sampling work, Contractor will make a judgement of the effectiveness of the project's statistics component technical findings and conclusions for the statistical component must be submitted to the evaluation team leader so that they can be fully integrated and consistent with other evaluation report recommendations.
3. As and member of the evaluation team assist the team leader to:
  - a) assess progress to date in the achievement of the institution building objective, in-country, third country and U.S. short-term and long-term training in following disciplines: forecasting, project planning and analysis, financial management of project, project implementation, agriculture policy, data collection, computer training, etc.;

Contract No. 631-0008-S-00-4008-00

b) check whether the delivery of project inputs both by USAID and GURC (vehicles and equipment, space, technical assistance, counterparts) has been made on a timely basis;

c) determine whether assumption of project, and its logical framework are still valid, and whether project activities, as currently undertaken, will lead to project objectives; whether project objectives should be changed;

d) determine whether objectively verifiable indicators of project objectives are still valid and can be utilized to measure project progress. If not, new indicators should be developed to enable the Mission to measure project progress.

C. Required Reports:

The Contractor shall assist the evaluation team leader (specifically regarding the statistics component) in meeting the following reporting requirement:

The preparation of a final report in English which summarizes progress in the achievement of project goal as spelled out in the Project Paper and the Project Agreement. This report shall present judgements as to whether the purposes should be modified to reflect current realities, whether there should be major changes in types or quantities of project inputs, and whether GURC is providing sufficient support to this project, as well as collateral activities to assure success. The report will also make recommendation and justification regarding continuation and/or extension of the project.

In addition to presenting the team findings in regard to the activities included in the scope of work, the final report will address the following concerns of USAID/Cameroon;

(a) What is the the actual and appropriate role of the planning and policy unit within the Ministry of Agriculture?

(b) What is the actual and appropriate role of the advisory team within the DEP and in the policy analysis and planning function of the MINAGRI;

(c) Assess productivity of the U.S. advisors.

(d) Relationship between the U.S., IBRD and FAC advisors.

(e) Assess the impact of the advisor on statistics and economic analysis capability of DEP.

Contract No. 631-0008-S-00-4008-00

3. Contractor will assist the evaluation team leader in the preparation of a final report, and ensure that the required statistics component inputs have been provided before the report is submitted to USAID/Cameroon PDE for final review.

ARTICLE II - PERIOD OF SERVICE OVERSEAS

- A. The contract period commences on January 11, 1984 and the estimated completion date is February 5, 1984.
- B. Contractor will work under the supervision of the USAID/PDE Officer or his appointed designee.

A N N E X II  
LIST OF INTERVIEWS

LIST OF PEOPLE MET

A. Ministry of Plan and Industry (MINPI)

1. Mr. Tchana Mesack, GURC Chief Evaluator

B. Ministry of Agriculture - Department of Studies and Projects (DEP/MINAGRI)

2. Mr. Joseph Kanga, Director of Studies and Projects.

3. Mrs. Elizabeth Balepa, Deputy Director of Studies and Projects

4. Mr. Pierre Kouang, Chief of the Statistics Division  
and National Director of the Ag. Census

5. Mr. Paul-Pierre Pouansi, Chief of Service of Ag. Surveys

6. Mr. Anabel Agoum, Chief of Service of Statistics

7. Mr. Clobert Thatat, Chief of the Division of Studies

8. Mr. Serge Van Outryve D'Ydewalle, IBRD Advisor

9. Mr. Michel Hannotiaux, FAC Advisor

10. Mr. Roger BANGWENI, Soil Scientist, Division of Studies

C. Ministry of Agriculture - Field Staff

10. Mr. Augustin Kouam, Provincial Delegate of Agriculture (Centre South)

11. Mr. Didier Bekono, Statistics Controller, Nyong-and-Soo Division

12. Two field enumerators (Nyong-and-Soo Division).

D. USAID/Y

13. Mr. Ronald Levin, Director

14. Mr. Bernard Wilder, Deputy Director

15. Mr. Herbert Miller, Program Officer

16. Mr. William Litwiller, Chief of Agriculture and Rural Development Office  
USAID/Yaounde and Project Officer.

17. Mr. Rolland Garner, Controller

18. Mr. Samuel Scott, Project Development and Evaluation Officer

19. Mr. Marcel Ngué, Assistant Project Officer

E. PASA

20. Mr. John Schamper, Chief-of-Party

21. Mr. William Kelly, Senior Statistician

22. Mr. John Litschauer, Survey Statistician

23. Ms. Sarah Lynch, Marketing Economist

**A N N E X III**  
**LISTING OF PIO/C'S**  
**AND COMMODITY ARRIVALS**

PROJECT INPUTS - COMMODITIES

<u>PIO/C No.</u>	<u>Items Purchased</u>	<u>PIO/C Date</u>	<u>Delivered to Project Date</u>
631-0008-4-90009	4 sets HH Furn	8-79	8-80
90110	Calculators	11-80	5-80
90049	12 Calculators & Misc	1-81	1-82 to 5-82
90049	Office supply	1-80	9-80 to 6-81
90065	4 vehicles & parts	3-79	3-81
90090	Survey equip.	7-80	4-81
90101	Electric typewriter	7-80	10-80 to 4-82
90109	Survey equip.	10-80	1-81 to 9-81
90114	Office & survey supplies	1-81	9-82 to 1-83
90143	vehicle parts	8-82	9-82
01006	10 vehicles & parts	8-80	4-81
01011	Periforal Comp. Equip.	6-81	7-82
01025	42 typewriters	10-80	9-81 to 6-82
10006	HH furn	2-81	PIO/C for more funds required in PIO/C 90009
10007	28 vehicles	5-81	2-82
10011	Micro data Processors	6-81	5-82
10050	Copy mach. & supplies	12-81	1-83
10056	Vehicle parts	1-82	8-82 to 2-83
10065	Survey equipment	6-82	3-83
10066	12 vehicles	6-82	11-82 to 10-83
10067	Office supplies	6-82	12-82
10061	Vehicle Spare parts	7-82	5-83
10077	Vehicle parts	12-82	2-83 to 4-83
10096	22 motor cycles	8-83	Not delivered.
10103	Vehicle spare parts	11-83	No P.O. issued

A N N E X I V  
LETTER FROM VICE MINISTER  
OF AGRICULTURE ON CENSUS DECISION

27

MINISTRE DE L'AGRICULTURE

MINISTRY OF AGRICULTURE

ACTION: ARD  
INTO: DIR  
D/DIR  
PRM  
C/MC/M  
R.F.  
44/83  
due 3/2

23 FEVR. 1983

Yaoundé, le \_\_\_\_\_ 19\_\_\_\_  
on the

00909

OFFICIAL FILE COPY  
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N° \_\_\_\_\_ /MINAGRI/JEP/

STAT.-  
5

C.ét. :  
Ref.

Objet Point sur la préparation  
Subject du Recensement Agricole  
des années

Le Ministre d'Etat chargé de l'Agriculture  
The Minister of State in charge of Agriculture

Stamp: ACTION TO ARD TRANS TAXER INIT  
Handwritten: 3/3/83  
Handwritten: 2/3/183

à M ONSIEUR LE DIRECTEUR DE L'USAID  
to B.P. 817

-YAOUNDE -

Monsieur le Directeur,

J'ai l'honneur de vous faire tenir par la présente, le point sur la préparation du Recensement Agricole.

I.- INSTITUTION DE L'OPERATION

Par décret n° 82/472 du 11 Octobre 1982 du Président de la République dont copie jointe, il a été instituée sur l'ensemble du Territoire National, une opération de Recensement Agricole. Conformément à l'article 1er dudit décret, le projet devra prendre fin en juin 1985.

L'objet du Recensement Agricole, selon l'article 2 du décret ci-dessus évoqué, porte sur l'inventaire général des ressources en hommes, en terres et en moyens de production que recèle notre Agriculture ainsi qu'au dénombrement des différentes activités du secteur. Sous la contrainte du calendrier agricole, les opérations sur le terrain commenceront en Avril-Mai 1983.

La première opération du genre a eu lieu au Cameroun en 1972 sous l'égide de la FAO, et celle qui vient d'être instituée fait suite du point de vue de la périodicité aux recommandations de la FAO qui a proposé la tenue d'un Recensement Agricole tous les 10 ans.

En fait le Recensement Agricole rentre dans l'effort plus large qu'entreprend actuellement le Gouvernement Camerounais pour se doter d'un appareil des statistiques agricoles efficace. En effet, lors de l'élaboration des IVe et Ve plans de développement Economique et Social, le manque de statistiques agricoles fiables, particulièrement sur le domaine des cultures vivrières, a été fortement déploré pour une planification rigoureuse du secteur agricole. Cette préoccupation a alors conduit le Gouvernement à signer avec l'USAID en Août 1979, une convention de financement d'un projet dénommé "Planification et Gestion Agricoles" pour le développement des Statistiques Agricoles.

Ce projet consiste à mettre en place un système permanent d'enquêtes agricoles annuelles sur le plan national pour la collecte des statistiques courantes, s'intéressant particulièrement à la superficie, la production et les inputs agricoles. Les délais inévitables que nécessitaient l'arrivée de l'Assistance Technique, la mise en place des investissements, la formation des cadres (aux USA ou sur place par des séminaires), la mise au point d'une méthodologie et la construction de la base de sondage, ne permettaient pas le démarrage des enquêtes sur le terrain avant 1982 ou 1983.

Avec le Recensement Agricole, l'on se trouvait ainsi placé devant le dilemme constitué par la coïncidence de deux importants projets intéressant le développement des statistiques agricoles, les deux devant intervenir sur le même terrain, en même temps et mobilisant les mêmes ressources. Toute alternative consistant à privilégier l'un aurait entraîné le risque de faire mourir l'autre. A la réflexion, il est apparu qu'il s'agit en réalité d'opérations proches dans le contenu, visant le même objectif et pouvant s'accommoder d'une même méthodologie. C'est ainsi que nous avons pris le parti de jumeler les deux opérations, le choix implicite étant que le Recensement Agricole serve de première enquête du système permanent d'enquêtes annuelles que le projet "Planification et Gestion Agricoles" entend mettre sur pied.

Dans ce sens, toutes les activités menées depuis fin 1980 par le Service de la Statistique Agricole dans le cadre du projet "Planification et Gestion Agricoles" l'ont été dans la perspective de la préparation du Recensement Agricole.

## II.- SITUATION DES REALISATIONS

### a) Formation des cadres

En 1980, en dehors du Chef de Service de la Statistique Agricole qui a une formation de base en Statistique, les autres cadres des Services de la Statistique Agricole, Agronomes, ne disposaient pas d'une telle formation, nécessaire pour l'élaboration et la supervision des enquêtes agricoles de l'envergure du Recensement.

Depuis ce temps :

- 9 cadres émanant des Services Centraux et Provinciaux ont pu bénéficier d'une formation adéquate aux USA, dont 4 pour une longue période (2 ans) et 5 pendant de courtes périodes (3 mois) ;

- un séminaire de 2 mois sur les éléments de statistiques de base a été organisé sur place en début 1982 à l'intention de tous les cadres des Services Centraux et Provinciaux de la Statistique Agricole.

.../...

Ainsi tous les responsables actuels des Services Provinciaux ont pu acquérir une formation convenable aux USA et sur place, tandis que le Service Central compte 3 Statisticiens de formation, 2 Agronomes ayant suivi une formation de longue durée en statistique aux USA, certains des autres cadres ayant participé au séminaire organisé sur place

Un séminaire avait été programmé pour fin 1982 à l'intention des Chefs de Section Départementale sur les rudiments de statistique, mais n'a malheureusement pas pu se tenir en raison des contraintes des travaux préparatoires du Recensement Agricole. Toutefois, une formation pratique leur sera dispensée avant le démarrage des opérations sur le terrain afin qu'ils soient pleinement aptes à superviser l'exécution des enquêtes dans leur ressort territorial.

#### b) RECRUTEMENT DES AGENTS RECENSEURS

Dans le cadre du projet "Planification et Gestion Agricoles", il est prévu le recrutement de 155 enquêteurs permanents :

- 51 l'ont déjà été dans la Province du Centre-Sud ;
- les 104 autres sont en cours de recrutement, qui sera effectif en Février 1983.

A ce pool d'enquêteurs permanents seront ajoutés 105 temporaires pour les besoins du Recensement.

#### c) SITUATION MATERIELLE

Le matériel ci-après est déjà disponible par l'intermédiaire du projet "Planification et Gestion Agricoles" :

- 53 véhicules (dont 4 à l'Assistance Technique) : 9 ont été distribués aux Services extérieurs, quelques uns sont encore en cours d'immatriculation, la distribution définitive est prévue en Février 1983 ;
- 40 machines à écrire, toutes distribuées dans les Sections Départementales ;
- un micro-ordinateur pour le dépouillement informatique des données : il sera installé en Mars-Avril 1983.

#### d) ACTIVITES TECHNIQUES

##### 1°/- METHODOLOGIE

Après une enquête-pilote réalisée en fin 1981, la méthodologie est définitivement arrêtée.

##### • Champ du recensement

Le champ du Recensement couvre :

- les exploitations de type traditionnel ;
- les exploitations de type moderne.

Les exploitations agricoles de type traditionnel feront l'objet d'une enquête par sondage. On distingue trois strates : une strate urbaine, une strate rurale et les grandes plantations.

Les exploitations agricoles de type moderne feront l'objet d'une enquête exhaustive, sur questionnaire spécial adressé aux unités concernées.

• Base de sondage des exploitations de type traditionnel

Elle est constituée de :

- la liste des grandes plantations ;
- pour la strate urbaine : les zones de dénombrement telles que l'espace géographique a été subdivisé durant le Recensement démographique de 1976 ;
- pour la strate rurale ; selon les cas, les zones de dénombrement du Recensement démographique 1976 ou les segments obtenus sur cartes géographiques en subdivisant l'espace géographique suivant des limites naturelles (routes, cours d'eaux, pistes, etc...)

• Tirage de l'échantillon

La stratification et la base de sondage sont définies à l'intérieur des Départements qui constituent le niveau administratif le plus bas d'établissement des résultats du Recensement. Autrement dit les résultats sont conçus pour n'être publiés qu'au niveau national, provincial et départemental. En effet, pour obtenir des résultats fiables au niveau des Arrondissements, il faudrait multiplier au moins par 3 la taille de l'échantillon, ce qui reviendrait à tripler au moins le budget disponible.

Le tirage de l'échantillon est le suivant :

- pour les strates urbaines et rurales : tirage à 2 degrés :
- 1er degré : tirage des segments ou des zones de dénombrement.

L'échantillon au 1er degré comptera 910 segments.

• 2e degré : tirage de 6 à 7 exploitations par segments-échantillon. Au total, l'échantillon comptera environ 6 000 exploitations.

- pour les grandes plantations, selon leur nombre, réduit ou important elles seront couvertes entièrement ou il en sera prélevé un échantillon.

2°/- Déroulement des travaux

• Questionnaires

L'élaboration du Questionnaire sur les exploitations tradi-

.../...

tionnelles ainsi que l'établissement des tableaux de sortie des résultats sont terminés.

La confection du questionnaire des exploitations modernes, entamée, sera terminée en fin Février 1983.

• Autres documents

- Instructions aux enquêteurs : rédaction terminée, actuellement en frappe ;
- Document sur la méthodologie : réalisé à 60%, sera terminé en fin Février 1983.

• Base de sondage

- L'élaboration de la base de sondage sur cartes géographiques et le tirage de l'échantillon au 1er degré sont réalisés à 70% : il reste une partie des Provinces du Nord et Centre-Sud: ce travail sera terminé fin Février 1983

• Programme informatique

Le questionnaire codé et les tableaux de sortie des résultats ont été soumis en mi-Décembre au Département de l'Agriculture des USA pour la confection du programme Informatique devant dépouiller le Recensement, dans le cadre d'un contrat que nous avons passé à cet effet. La livraison dudit programme est attendue en mi-Mars 1983.

III.- REALISATIONS RESTANT AVANT LE DEMARRAGE DES  
OPERATIONS SUR LE TERRAIN

a).- Activités techniques

- Confection du questionnaire des exploitations modernes à terminer en fin Février 1983 ;
- Document d'instructions aux enquêteurs à terminer en fin Février 1983 ;
- Confection du document d'instructions aux superviseurs (contenu de la supervision, maintenance des véhicules, gestion des fonds et du matériel du Recensement placé sous leur responsabilité) : sera réalisée en début Mars 1983 ;
- Elaboration de la base de sondage et tirage de l'échantillon : à terminer vers fin Février 1983 ;

.../...

- Programme informatique : livraison attendue pour mi-Mars ;
- Formation des enquêteurs programmée pendant les 3 premières semaines du mois d'Avril.

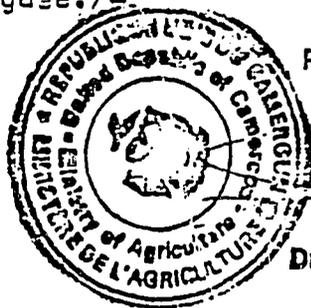
b).- Opérations financières

Ces opérations devront être engagées avant le 15 Février au plus tard pour la plupart des Transactions.

Il s'agit de:

- . Soumission des documents (questionnaires, instructions aux enquêteurs, instructions aux superviseurs, méthodologie) à l'imprimerie pour impression ;
- . Achat d'équipement des enquêteurs : bottes, parapluie, boîtes à pharmacie, sacs, sous-mains, crayons ;
- . Dépenses pour formation des enquêteurs : support pédagogique, hébergement et restauration des enquêteurs ;
- . Recrutement de 105 enquêteurs temporaires, en Février ;
- . Recrutement de 4 Secrétaires Dactylographes temporaires pour la saisie informatique, en Mars 1983 ;
- . Recrutement de 45 Chauffeurs temporaires, en Février, dans les Services provinciaux et les Sections Départementales qui n'en disposent pas ;
- . Achat de 8 véhicules tout-terrain dont 4 pour les 4 nouvelles Sections Départementales du Nord et 4 pour le remplacement du parc actuel./-

Veuillez croire, Monsieur le Directeur, à l'expression de ma considération distinguée./-



Pour le Ministre d'Etat Chargé de  
l'Agriculture  
LE VICE-MINISTRE

*[Signature]*  
Dr. Solomon NFOR GWEI

**A N N E X V**  
**CENSUS ENUMERATOR/SUPERVISOR**  
**TRAINING SCHEDULE**

MINISTERE DE L'AGRICULTURE

REPUBLIQUE UNIE DU CAMEROUN

Paix - Travail - Patrie

DIRECTION NATIONALE DU  
RECENSEMENT AGRICOLE

LETTRE CIRCULAIRE N° \_\_\_\_\_/MINAGRI/DNRA/DM/

//  
// E DIRECTEUR NATIONAL  
DU RECENSEMENT AGRICOLE

\_+)\_

TOUS LES DELEGUES PROVINCIAUX DE L'AGRICULTURE  
(SUPERVISEURS PROVINCIAUX DU RECENSEMENT  
AGRICOLE)/

Object : Calendrier et Respon-  
sables des Sessions de  
Formation pour les  
Formes 0 et 1.-

Suite aux décisions et recommandations prises lors de notre réunion  
de concertation des 10, 11, 12 et 13 janvier à Yaoundé,

J'ai l'honneur de vous communiquer ci-joint le calendrier et les  
responsables des sessions de formation des Superviseurs, Contrôleurs et  
Enquêteurs pour les Formes 0 et 1.

Le calendrier pour les sessions de formation de la partie Nord  
du pays sera communiqué ultérieurement.

Le Directeur National du  
Recensement Agricole,

KOUANG Pierre.  
Ingénieur Statisticien-Economiste.

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1 - Formation pour la Forme 0

a) Formation des Superviseurs et Cadres des bureaux provinciaux.

Date	Lieu	Responsables
Mercredi 8 février et jeudi 9 février 1984	LIMBE	POUANSI Paul-Pierre William KELLY, John LITSCHAUER

b) Formation des Contrôleurs et Chefs d'Equipes

Date	Lieu	Responsables
Mercredi 22 février et jeudi 23 février 1984	A fixer par chaque Superviseur Provin- cial	Chaque Superviseur Provincial et ses 2 cadres

N.B. : Cette formation se fera simultanément dans chaque Province.

C) Formation des Enqueteurs

Période	Province	Responsables
Vendredi 24 février et samedi 25 février 1984	EST	Superviseur + Cadres Provinciaux
Vendredi 24 février et samedi 25 février 1984	CENTRE	Superviseur + TAKOU
Vendredi 24 février et samedi 25 février 1984	CENTRE	1 Cadre Provincial + AYISSI
Vendredi 24 février et samedi 25 février 1984	SUD	1 Cadre Provincial + NJEJOU
Vendredi 24 février et samedi 25 février 1984	SUD - OUEST	Superviseur + William KELLY
Vendredi 24 février et samedi 25 février 1984	LITTORAL	Superviseur + Cadres bureau provincial
Vendredi 24 février et samedi 25 février 1984	OUEST	Superviseur + 1 Cadre provincial
Vendredi 24 février et samedi 25 février 1984	OUEST	1 Cadre provincial + POUANSI
Vendredi 24 février et samedi 25 février 1984	NORD-OUEST	Superviseur + NGENGE WAWA
Vendredi 24 février et samedi 25 février 1984	NORD-OUEST	1 Cadre provincial + John LITSCHAUER

N.B. : Chaque Superviseur Provincial est chargé de communiquer à la Direction Nationale du Recensement Agricole au plus tard le 3 février 1984, le (ou les) lieu (x) retenu(s) pour la formation des Enquêteurs dans sa Prcvince.

\* Cette formation se fera simultanément dans chaque province.

- Le transport des Enquêteurs au lieu de formation devra être assuré par le véhicule de la Section Départementale et éventuellement par le véhicule du Service Provincial.

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2) Formation pour la forme 1.

a) Formation des Superviseurs et Cadres des bureaux provinciaux.

Date	Lieu	Responsables
Du mercredi 21 mars 1984 au samedi 24 mars 1984	BAFOUSSAM	POUANSI Paul-Pierre William KELLY

b) Formation des Contrôleurs et Chefs d'Equipes.

Date	Lieu	Responsables
Vendredi 30 mars samedi 31 mars lundi 2 avril mardi 3 avril 1984	A fixer par chaque Supervi- seur Provincial	Chaque Superviseur Provincial et ses 2 Cadres.

N.B. : Cette formation se fera simultanément dans chaque Province.

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C) Formation des enquêteurs

Période	Province	Responsables
Les 4, 5, 6 et 7 avril 1984	EST	Superviseur + Cadres provinciaux
Les 4, 5, 6 et 7 avril 1984	CENTRE	Superviseur + TAKOU
Les 4, 5, 6 et 7 avril 1984	CENTRE	1 Cadre provincial + AYISSI
Les 4, 5, 6 et 7 avril 1984	SUD	1 Cadre provincial + NJEJOU
Les 4, 5, 6 et 7 avril 1984	SUD-OUEST	Superviseur + Zilliam KELLY
Les 4, 5, 6 et 7 avril 1984	LITTORAL	Superviseur + Cadres bureau provincial
Les 4, 5, 6 et 7 avril 1984	OUEST	Superviseur + 1 Cadre provincial
Les 4, 5, 6 et 7 avril 1984	OUEST	1 Cadre Provincial + POUANSI
Les 4, 5, 6 et 7 avril 1984	NORD-OUEST	Superviseur + NGENGE WAWA
Les 4, 5, 6 et 7 avril 1984	NORD-OUEST	1 Cadre Provincial + John LITSCHAUER

N.B. : Chaque Superviseur Provincial est chargé de communiquer à la Direction Nationale du Recensement Agricole au plus tard le 15 mars 1984, le (ou les) lieu (x) retenu(s) pour la formation des Enquêteurs dans sa Province.

\* Cette formation se fera simultanément dans chaque province.

- Le transport des Enquêteurs au lieu de formation devra être assuré par le véhicule de la section départementale et éventuellement par le véhicule du Service Provincial

A N N E X VI

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A N N E X VII  
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PROJECT PAPER IMPLEMENTATION PLAN

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05-80	Ag. Stat. Handbook	09-82	Plan Schedule (sub-sector studies)
05-80	Annual Work Plan	10-82	Evaluation (cont'd)
09-80	Participant Training	03-83	Annual Work Plan
10-80	Evaluation (cont'd)	04-83	Depart 2 Technicians
02-81	Sector Analysis (Draft)	12-83	Updated Handbook
05-81	Sector Analysis (Final)	03-84	Final Evaluation
		05-84	Final Report

CHRONOLOGY OF ACTIVITIES

10-78 Project Paper approved

8-79 Project Agreement signed

10-79 Tech. Assist. Agreement signed

4-80 Survey Statistician Arrival

6-80 2 statisticians depart for S T Training

9-80 2 statisticians return from S T Training

10-80 Senior Economist arrival

12-80 Began study on Consumption effect on Ag Policy

11-80 Marketing Economist arrival

1-81 Initiated Work on National Food Plan

9-81 S T Consultation - computer system specifications

3-81 4 vehicles arrive

4-81 Survey Equipment arrives

4-81 10 vehicles arrive

5-81 Began Study on Structure of NWCA

5-81 3 statisticians depart for S T training

5-81 2 statisticians depart for L T training

5-81 Completed National Food Plan

6-81 Completed Study Consumption effects of Ag Policy

8-81 3 statisticians return from S T training

9-81 Began TOR S. Littoral

9-81 Survey equipment arrives

12-81 Training Plan revised.

1-82 Completed TOR S Littoral

1-82 1 Economist departs for L T Training

2-82 28 vehicles arrive

2-82 In country training course "Basic data and data presentation"  
2 short term consultants participate

3-82 Computer received and tested in SRS Wash.

3-82 In-house evaluation begun

4-82 In-house evaluation completed

4-82 Statistics Work plan prepared.

4-82 Computer shipped from SRS Wash.

6-82 Began Cocoa Cost of Production Study

6-82 Began Socio-Econ study FSAR

6-82 Began study Tech Support Centers

7-82 Statistician departs for S T training

9-82 Statistician returns from S T training

10-82 Census Decree issued

10-82 1 Economist departs for S T training

10-82 Began developing software

11-82 1 Economist returns from S T training

2-83 Completed Socio/econ study FSAR

2-83 MOA advised USAID/Cam. of Census decree and change of plans regarding annual surveys.

2-83 Decree issued reorganizing DEP"

2-83 3 week consultant - install computer

3-83 Began Agr. Sampling Frame Construction

3-83 Statistics work plan revised

3-83 3 Economists depart for L T training  
2 Statisticians depart for L T training

4-83 Completed Software Development SRS Wash

5-83 St Consultant - install computer software

6-83 2 Statisticians return from L T training

7-83 Littoral Sud Feasibility Team Arrives  
9-83 Completed Sampling Frame Const.  
9-83 Completed Segment Selection  
10-83 One Month Consultant - install and provide  
training on summary packages  
10-83 11 enumerator schools held  
11-83 Completed S Littoral Feasibility Study  
11-83 Completed Cocoa Cost of Prod. Study  
12-83 Completed Tech Support Center Study

**A N N E X V I I I**

**S U M M A R Y O F E C O N O M I C A D V I S O R A C T I V I T I E S**



**TABLE 7**  
**SUMMARY OF ACTIVITIES**  
**SENIOR ECONOMIST/CHIEF OF PARTY**  
**OCTOBER 1980 TO JANUARY 1984**

	1980			1981			1982			1983			1984					
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
<b>I. Proj. Operations Man.</b>																		
<b>A. Local Procurement</b>																		
1. Temp Help	1	1	1				1	1	1	1	1	1	1	1				
2. Supp & Mat	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>B. Misc. local expenditure</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>C. Stateside Procure.</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>D. Commodity Man.</b>																		
1. Customs Clear.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Local Trans.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Warehousing				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4. Distribution							2	2	2	2	2	2	2	2	2	2	2	2
<b>E. Motor Pool Man.</b>																		
1. Tech. veh.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. GUAC veh.				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>II. Chief of Party</b>																		
<b>A. Project Communications</b>																		
1. Reporting	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Cables & memos	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3. Verbal Rep.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>B. Team Superv.</b>																		
1. PASA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Local Hire	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>C. Work plan, PER</b>	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>III. Professional/Economist</b>																		
1. Tech. Consult.	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
2. DEP Reorg.	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
3. Cacao Cost																		
4. Tech Supp Cen.																		
5. Consump Eff.																		
Ag Policy	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
6. Soc. Sci. RPC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7. S. Littoral				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8. Self Suff Index																		
9. Proj. Design En (C.N ZHPI, H.P.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10. N. Cam Lives.				2	2													
11. Af Dev BK-C																		
12. Ag Prices Sem.																		
13. WB Ag Res. Proj.																		
14. Impl. Sem Vth Pbn																		
15. WB Ag Inputs																		
16. FAO AA Ext Study																		

**Key**

Level of Involvement

3 = high level

2 = Medium level

1 = low level

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