AID 1025-1 (7-71) (FACE SHEET) PD-AAB-130-B1 5240105 ②

NONCAPITAL PROJECT PAPER (PROP)

I. PROJECT IDENTIFICATION

1. PROJECT TITLE: Agricultural Planning and Statistical Services

APPENDIX ATTACHED: ☒ YES ☐ NO

2. PROJECT NO. (M.O. 1095.2): 524-11-140-105

3. RECIPIENT (specify): ☒ COUNTRY Nicaragua ☐ REGIONAL ☐ INTERREGIONAL

4. LIFE OF PROJECT: BEGINS FY 74 ENDS FY 78

5. SUBMISSION: ☒ ORIGINAL 10/18/73 DATE ☐ REV. NO. DATE

CONTR./PASA NO.

II. FUNDING ($000) AND MAN MONTHS (MM) REQUIREMENTS

A. FUNDING BY FISCAL YEAR	B. TOTAL $ 000	C. PERSONNEL (1) 000	C. PERSONNEL (2) MM	D. PARTICIPANTS (1) 000	D. PARTICIPANTS (2) MM	E. COMMODITIES $ 000	F. OTHER COSTS $ 000	G. PASA/CONTR. (1) 000	G. PASA/CONTR. (2) MM	H. LOCAL EXCHANGE CURRENCY RATE: 5 US 1: 7.0 (U.S. OWNED) (1) U.S. GRANT LOAN	(2) COOP COUNTRY (A) JOINT	(2) COOP COUNTRY (B) BUDGET
1. PRIOR THRU ACTUAL FY												
2. OPRN FY	248.6	106.0	26.5	62.4	81	70.2	10.0	100.0	25			
3. BUDGET FY	219.6	108.0	27	91.6	103	10.0	10.0	100.0	25			
4. BUDGET +1 FY	168.7	96.0	24	52.7	54	10.0	10.0	92.0	23			
5. BUDGET +2 FY	120.8	74.0	18.5	28.8	36	10.0	8.0	72.0	18			
6. BUDGET +3 FY	57.0	48.0	12	-	-	7	2.0	48.0	12			
7. ALL SUBQ. FY												
8. GRAND TOTAL	814.7	432.0	108	233.5	274	107.2	40.0	412	103			

9. OTHER DONOR CONTRIBUTIONS

(A) NAME OF DONOR	(B) KIND OF GOODS/SERVICES	(C) AMOUNT

III. ORIGINATING OFFICE CLEARANCE

	TITLE	DATE
1. DRAFTER: Mack H. McLendon	Deputy Food & Ag Officer	10/18/73
2. CLEARANCE OFFICER: Carl D. Keene	Food & Agriculture Officer	10/18/73

IV. PROJECT AUTHORIZATION

1. CONDITIONS OF APPROVAL: The PROP is approved for two fiscal years (FY 1974 and FY 1975). The funding level for FY 1975 is as yet undetermined and will be established in conjunction with the consideration of the proposed sector loan. USAID should seek to the maximum extent feasible to include the proposed A.I.D. funding in FY 1975 (and subsequent years) under the proposed loan. 2. Prior to any major procurement for technical assistance or commodities under the PROP, the Mission will assure: A. That the GON has taken any necessary legal or administrative actions and has made the specific budget and personnel allocations sufficient to insure expeditious implementation of the project during CY 1974; B. That GON will provide adequate maintenance facilities as well as budget allocations

2. CLEARANCES

BUR/OFF.	SIGNATURE	DATE	BUR/OFF	SIGNATURE	DATE
LA/DP	George Hill (draft)	11/23/73	GC/LA	Eugene Harkins (draft)	11/23/73
LA/MRSD	Donor Lion (draft)	11/23/73	LA/CEN	Tom Mehen (draft)	11/23/73
LA/OPNS	Cecil Uychara (draft)	11/23/73	LA/DR	John R. Breen	11/23/73

3. APPROVAL AAs OR OFFICE DIRECTORS

SIGNATURE: Herman Kleine, AA/LA DATE: 11/27/73

4. APPROVAL A/AID (See M.O. 1025.1 VI C) SIGNATURE DATE

Agricultural Planning and Statistical Services

1. Introduction

For several years the USAID has been assisting the GON with agricultural development projects which have met with varying degrees of success. However, the Mission has become increasingly aware that large production increases of some grain crops have not necessarily meant larger income and better living conditions for farm producers. Oversupply due to weaknesses in the storage and marketing programs permitted prices to fall to uneconomic levels for all but the most efficient producers. While objectives of increased production were realized initially, further increases were discouraged by price instability.

Particularly affected by falling crop prices after 1968 were many of the small producers. Though technological improvements, fertilizer use and bank credit were extended, at least to part of the small farmers, the crop in prices due to excess supply caused them, as well as larger producers to cease production of basic grains for market and either migrate to cities or plant other crops.

It was, therefore, decided by AID in late 1971 (see AIDTO A-55, dtd. Oct. 1971) that no further significant U.S. assistance would be granted to the Nicaraguan agricultural sector until a sector analysis had been performed to identify constraints to equitable development and to establish priority areas of investment for development purposes. This decision was conveyed to the highest levels of the Nicaraguan government in January 1972. Following a series of consultations between representatives of the GON and of AID, a decision was reached by the GON to proceed with the proposed sector analysis.

A project was developed and an agreement negotiated whereby the GON would assume major responsibility for the analysis and AID would assist with funding for technical assistance, part of the costs of necessary commodities and part of the operational expenses. A staff was recruited from the various agencies and institutions which are concerned with the agricultural sector and the Vice Minister of Agriculture was designated as coordinator of the project. The agricultural sector analysis study was actually begun in September 1972. The sector analysis work group reports directly to the high-level agricultural committee, appointed by decree, that will participate in strategy formulation, establish priorities and approve the forthcoming development plan. After some delays encountered early in 1973, as a result of the December 23, 1972 earthquake, present indications are that the plan will be finalized in February 1974.

2. History and Statement of the Problem

Nicaraguan agriculture has never benefited from advantages to be gained from effective planning based on current, reliable statistics. Although recognized over the years as an undesirable situation, the seriousness of the matter was brought to the forefront during the preparation of the agricultural sector analysis. Study has demonstrated gross errors and conflicting figures used by different agencies in the past.

Recently, responsibility for the collection of statistical data, including that pertaining to the agricultural sector, has rested in the Ministry of Economy. The Ministry of Economy has, in turn,

Conditions and Approval (continued)

for the operation and care of vehicles provided hereunder;

C. That GON has given adequate assurances that sufficient computer time will be made available to process and analyze data collected pursuant to the project.

passed on a major part of this responsibility to the Central Bank. In 1971, the Office of Statistics and Census of the Central Bank in cooperation with the Ministry of Economy gathered data for the 1971 census. Although the Central Bank publishes considerable agricultural statistical material annually, the people who do the work are the first to recognize a substantial margin of error. Published data is estimated through a method based on per capita consumption as determined by an INCAP nutrition survey made in 1967, combined with export and import figures and yield data supplied by the National Bank of Nicaragua. In addition, the various agricultural entities conduct surveys and prepare studies and reports on a considerable broad scope of activities that address their particular interest and on-going activities. This results in a duplication of efforts together with several sets of data that frequently cannot be reconciled.

Over the years central government and autonomous agencies have, to a certain degree, carved out respective areas of interest and operated within this general scope. This has resulted in incomplete coverage of some activities and overlapping in others from a data gathering and statistical point of view. The Central Bank's efforts to bring all statistical activities together have met with little success. Past efforts to establish an effective agricultural planning mechanism have likewise failed. All of these shortcomings have been clearly identified during the twelve-month deliberations of the agricultural sector analysis work group.

Experience indicates that secondary data for export crops such as cotton, sugarcane, coffee and bananas are reasonably reliable, insofar as production, acreage planted and yields are concerned. Not enough is known for these crops, however, regarding the economics of production and the production variables in the different regions of the country. In the case of domestic food crops, there is very little reliable primary or secondary data available on the production, yields, area planted, cost of production or marketing. These include corn, beans, rice, sorghum, pasture, fruits and vegetables. Most of the arable land and all of the low and medium income farmers fall in this category. This is identified in the sector analysis as where initial emphasis of the gathering of statistics and planning should start. Data was so weak in this area that the sector analysis work group conducted a food crop survey during the process of the analysis.

Some preliminary work has been done by international technicians in design and methodology of data collection for this basic food crop-small farmer sector. Under the provisions of UNDP Project Nic. 71/004, one statistical expert of FAO provided technical assistance in the tabulation and analysis of 1971 census data. This technician also assisted with the design of a program to provide continuous time series agricultural statistics and with the design of sampling procedures for agricultural surveys.

In 1972, Mr. John Fitzinger, a USDA statistician, was brought to Nicaragua to assist in the design of surveys for basic crops production forecasting and to assist in evaluation of work previously completed in this area. While here he also reviewed some of the work performed by the statistical group of the Central Bank and a number of proposals developed by the FAO advisor. He found the work and survey designs basically sound.

In addition to the preliminary program designs, there is also some institutional base and personnel on which to build. Personnel that developed the 1963 and 1971 general census have training in most aspects of gathering and tabulating data. There are also trained people in planning. The

---

Assistance under this project is scheduled to terminate February 1974.

twelve economists working on the sector analysis have learned a lot about planning the past twelve months. There are at least ten people trained by AID and the OAS in the fields of statistics and planning whose services could be utilized in agricultural data collection and planning units.

Unfortunately, the 1972 Managua earthquake not only destroyed major portions of the agricultural statistics collected in the 1971 census, but also necessitated the diversion of GON resources to reconstruction and relief. Thus, the establishment of a permanent system for the collection, tabulation and analysis of statistical data pertaining to the agricultural sector suffered a severe blow.

The earthquake did not, however, reduce the need for basic agricultural data. Since 1970, international donor and lending institutions have placed increasing emphasis upon the performance of sector studies or sector analysis to determine development constraints and to assist in the establishment of host country development priorities as a pre-condition for the granting of development loans or grants. The creation and development of the proposed analysis planning and evaluation unit, which would work with reliable statistical data generated by the agricultural statistical unit, would provide a continuing analytical and planning capability within the GON.

This unit will address such problems as rural income distribution, rural employment, development and conservation of renewable natural resources, farm management, agricultural production, agricultural marketing and manpower development. It will develop plans for projects or programs to alleviate or overcome problems identified in each area studied.

The minimal base line data being used by the sector analysis group must be broadened and a system for time series collections must be established for each data area if Nicaraguan agricultural investment and public programs for rural development are to be rationally planned. Both the basic statistics themselves and analysis based on them could be used, further, by INCEI in planning price stabilization policy, and export-import programs; by the banking sector to determine priorities in production financing, by the agricultural trade sector to guide buying and selling operations; and by the Ministry of Agriculture, to determine program effectiveness, areas for research and priorities for extension work and fund allocations in general.

The Government will inevitably continue to invest in agriculture, presumably as effectively as it can, given available information. Their awareness, following the sector analysis experience, of their limited capability in the area of planning such investment has encouraged discussions with USAID in search of a way to institute both statistics gathering and analytical planning capability. In addition to the availability of a limited number of trained statisticians and the experience gained by the sector group, a great deal of training must be done to overcome the shortage of professionals and sub-professionals in both areas of contemplated activity. Lack of equipment for field visits, for data tabulation and computer processing is also an obstacle to GON assumption of full financial responsibility for these proposed programs. Thus a consensus was reached that USAID would assist in the early training for these two future units and in provision of initial vehicles and statistical tabulation and processing machines, as well as offering technical advice in refining methodology of surveys and planning. The GON would assume major responsibility for salaries of counterpart personnel and office facilities.

3. Project Description

The project will actually consist of two sub-projects: 1) the establishment of a unit for collection and tabulation of agricultural statistics, and 2) the creation of a permanent analysis, planning and evaluation group. These two activities are discussed separately throughout this document in order to more clearly describe the prevailing situation and specify what is expected to be accomplished. Nevertheless, the two go together like needle and thread. The statistical operation will be the primary support for the agricultural analysis, planning and evaluation group. Unless operation statistics are tabulated and used for specifc purposes they are of questionable value. Likewise, reliable information, statistics in this case, is essential for meaningful planning and investment programming. Evaluations of program effectiveness are difficult to perform in a meaningful way without adequate base line and time series data.

This project provides for, 1) the creation of an agricultural statistics unit to become a part of the Institute of Statistics and Census that is scheduled to be given autonomous status in January 1974, and 2) transformation of the agricultural sector analysis work group into an analysis, planning and evaluation unit that will function in the Ministry of Agriculture. This unit will do the economic research, planning and evaluation for the entire agricultural sector. Consideration is also being given to strengthening this unit, beginning in 1975, to enable it to become the implementation unit of the GON to manage international lending in the sector. Ideally, all central and autonomous agencies would be subordinate to it, insofar as allocation of public funds for agriculture are concerned.

Close coordination between the two units will be maintained and joint decisions will be reached on precisely what data will be collected annually. Furthermore, the methodology employed will be mutually agreed upon. These provisions ensure that there will be a close working relationship between the two project activities.

One final issue to be addressed is whether or not the importance of timely agricultural statistics justifies the establishment of a separate and independent data processing unit, or whether the needs of the sector can be met by relying on facilities in general use by all government agencies, or through contracting for processing outside of Nicaragua. The GON has one computer physically located in the Ministry of Finance that all agencies rely upon for data processing. At present, earthquake related efforts are given priority, and it has been impossible to rely upon this facility for agricultural data. The Central Bank has only one computer programmer, who cannot stay current on demands for his services. The 1971 agricultural census was processed through an arrangement with the University of Missouri. USAID foresees the need to supply at least temporary financial assistance to contract processing of data, until this issue is resolved by the GON and appropriate investments made.

A. Agricultural Statistical Unit

An agricultural statistical unit will be formed within the Central Bank's Statistical and Census Office by drawing on the personnel trained for the 1971 census. The Central Bank, assisted by a FAO technician has already developed a rural household sample in the western portion of the country. The country, exclusive of the sparsely populated Atlantic coastal zone, has been divided into 1,650 sectors. Within each geographic region, 20% of the sector was selected at random. Each sector is being further sub-divided into from 3 to 7 segments. After the segments are constructed in the selected sectors one segment from each sector containing from 3 to 5 segments and two segments

from each sector containing 6 or 7 segments, will be selected for enumeration. This will result in approximately a 4½% overall sample of households. The segmentation process included on-the-ground map verification of sector and segment boundaries and preparation of lists of farmers in each segment of the sample. On the basis of survey data obtained from the first survey conducted in 1974 a stratification for a more efficient agricultural sample will be completed, and the sample redesigned, with emphasis on basic grains and cattle inventories in the initial phases.

The stratification and redesign of the sample for agricultural production will increase the efficiency of the data collection system to achieve regional estimates in the near future. It will also provide for more flexibility in the system and permit the conduct of special surveys in the most efficient manner.

The project will encompass a continual research aspect in that constant testing of techniques will occur. Specific areas of the research will include work on frame construction, sample designs, data collection procedures, forecasting techniques, and tabulation procedures.

Preliminary evidence indicates that imagery from the ERTS satellite will contribute significantly to the construction of a sample frame. NASA will be requested to support this project by providing imagery for Nicaragua. Research, testing satellite data with ground data, may have major implications for the future development of agricultural data systems in Nicaragua and other developing countries.

Initially the system will be developed to collect data on a limited number of basic grain crops, so that initial efforts will be kept simple and emphasize quality of data rather than volume. Once the basic systems are functioning the scope of the program will be expanded to include more commodities and more refined estimates of these commodities.

The system will also provide a tool for purposes of conducting special studies during the last three years of this project. Thus, special studies may be one time surveys regarding economic data, such as cost of production data, or other input type studies.

Final methods employed will be based on information from initial 1974 surveys and research, and will be worked out cooperatively between project technicians and administrators of USAID and GON.

B. Analysis, Planning and Evaluation Unit

An analysis, planning and evaluation unit will be formed, tentatively, in the Ministry of Agriculture by drawing on the personnel of the sector analysis work group. This group will be charged with responsibility for analysis of all available agricultural statistical data, evaluation of the impact of on-going and proposed projects and programs and, in coordination with executing agencies, the development of new activities in the agricultural sector.

The Goal

To develop and institutionalize GON capacity to plan, organize and implement agricultural development programs based upon reliable statistics and methodology.

Measures of Goal Achievement

A. A statistical institute with an agricultural division established and functional.

B. Rural development projects and programs systematically developed, financed and implemented to overcome constraints identified by the sectoral analysis.

C. Implementation of institutional, budgetary and policy changes identified in the agricultural sector analysis as necessary to overcome constraints to development. The data compiled and reports submitted by the agricultural sector analysis team will serve as a base from which progress may be measured.

Means of Verification of Measures of Goal Achievement

A. A systematic review of projects and programs implemented to overcome development constraints identified by sector analysis.

B. A systematic review of institutional, budgetary and policy changes resulting from analysis and planning activities.

Assumptions for Achieving Goal Targets

A. The GON will enjoy sufficient political and economic stability to permit execution of long-term development activities.

B. The GON will pursue policies which tend to favor long-term development.

Project Purpose

A. To establish within an appropriate entity of the GON an effectively functioning unit responsible for the collection of agricultural statistics required for rural development planning, and

B. To develop within an appropriate entity of the GON an effectively functioning analytical, evaluation and planning unit for the rural sector.

Conditions that Will Indicate Purposes Have Been Achieved (EOPS)

A. For purpose "A".

1. A five man professional staff, with thirty-four sub-professionals and supporting personnel in place, fully equipped, trained, operational and fully financed by the GON for gathering and tabulating statistics.

2. Basic agricultural statistics on a current basis available for planning purposes.

3. GON data user agencies (INCEI, BNN, MAG, etc.) have confidence in and utilize statistical data produced.

B. For purpose "B".

1. An eight man professional staff with nineteen supporting personnel in place, trained, operational and fully financed by the GON for analysis and planning of the agricultural sector.

2. Rural development project analysis evaluation and planning being carried out on a continuing basis with results reflected in reforms undertaken and new initiatives implemented.

3. Political leaders respect and are responsive to recommendations developed by the unit.

Means of Verification that Project Purpose Has Been Achieved

A. 1. Trained personnel in place and supported by GON budget line items.
2. Review published reports.
3. Agriculture data user agencies rely on data developed by the unit.

B. 1. Same as A-1 above.
2. Review reforms undertaken and new initiatives implemented.
3. Recommendations adopted by GON policy makers.

Assumptions for Achieving Purpose

A. The GON is prepared to support, on a continuing basis, programs and projects which contribute to rural development.

B. The GON is prepared to implement institutional, organizational and policy changes when such changes are indicated by sound analysis of pertinent data.

C. The GON will assign competent personnel and provide budgetary support for both data gathering and analytical and planning activities.

D. Central government, autonomous and semi-autonomous agencies concerned with the agricultural sector will cooperate with the statistical and analysis and planning units.

Outputs of Agricultural Statistical Unit

A. Increased scope, accuracy and timeliness of primary current agricultural data.

B. A series of national and regional estimates of crop production and livestock inventories.

C. Special studies as needed by the agricultural analysis, planning and evaluation unit.

Outputs of the Analysis, Planning and Evaluation Unit

The outputs of this unit might be summarized by stating them as the development plans and programs that evolve from its deliverations. Considerable flexibility will be required to accommodate the action priorities yet to be established by the high level agricultural committee, following submission of the sector analysis studies.

Expected outputs as presently envisioned include:

A. Development of plans for a national program for the development and conservation of renewable natural resources.

B. Evaluation of government policies affecting rural income distribution and development of recommendations for policy changes.

C. Evaluation of the rural employment problem and development of program recommendations to reduce unemployment in rural areas.

D. Develop plans for a program which would contribute to increasing the general level of farm management practices.

E. Evaluation of GON programs directed toward increasing crop production (i. e., crop research, extension, production credit, etc.) and develop recommendations to up-grade these programs.

F. Evaluation of agricultural marketing systems and programs and the development of recommendations, projects and/or programs to improve the efficiency thereof.

Magnitude of Outputs of the Agricultural Statistical Unit

A. and B.

1. 1974 a. National estimates of production for rice, corn, beans, sorghum.
   b. National inventories cattle and hogs.

2. 1975 a. National estimates and forecasts of production rice, corn, beans and sorghum.
   b. National estimates cotton, coffee, sugar, bananas, tobacco.
   c. National inventories cattle and hogs.

3. 1976 a. National and regional estimates and forecasts of production for rice, corn, beans and sorghum.
   b. National and regional production estimates cotton, coffee, sugar, bananas tobacco.
   c. National and regional inventories cattle and hogs.
   d. Disposition estimates basic grains.

4. 1977 a. National and regional estimates and forecast basic grains and export crops.
   b. National and regional estimates livestock.
   c. National estimates specified fruits and vegetables.

5. 1978 a. National and regional estimates and forecasts of basic grains, export crops and specified fruits and vegetables.
   b. Semi-annual national and regional inventories livestock.

C. As required to meet the needs of the agricultural analysis, planning and evaluation unit beginning in CY 1976.

The initial 1974 surveys will include questions concerning social and demographic information as well as farm characteristics. These data will be used primarily for future planning and refinement of the data collection system and may not be sufficiently reliable for publication. However, they will be made available for the planning group to use in planning, analyzing and evaluating GON agriculture sector programs and projects.

After the first year's surveys it will be possible to design efficient and reliable surveys for special purposes such as determining cost of production for specific crops, rural consumption, crop disposition, family characteristics, etc. The information generated will depend upon the priorities set by the planning and evaluation group.

It is understood that small farmer well-being is a major objective of the project and that data will be collected which will enable the planners to identify programs and projects which can have significant impact on the small farmer.

Project Inputs

1. Agricultural Statistics Unit

a. Technical personnel services

Thirty-eight man months over the life of the project. It is anticipated that the major part of these services will be obtained through the Statistical Reporting Service of the USDA through PASA arrangements. Assistance required will include services of a mathematical statistician experienced in agricultural samples, a mapping statistician familiar with the use of aerial photography in agricultural samples, a commodity statistician familiar with crop forecasting and a general agricultural statistician who will assist with training of local staff and coordinate the other assistance activities.

b. Participant Training

For this phase of the project it is considered highly desirable to have a minimum of three well trained statisticians with several other staff members trained in basic statistics, with emphasis on agricultural statistics. In addition, special training for two computer programmers is needed. To accomplish the above, funding for up to 6 man years of academic training in statistics, 28 man-months of specialized training, such as that described in course No. 140-4 of the Development Training Guide, 1972, and 12 man-months of other short term U.S. training is provided as follows:

U.S. academic training	6 man years	$57,600
U.S. short term	40 man-months	53,000
		$110,600

c. Commodities

Vehicles
Office furniture and office machines

It is anticipated that a limited amount of used office furniture and office machines will be available through GON sources, however, the major part of equipping the unit with vehicles, office furniture and office machines will be funded by AID grant. Initial requirements for AID financing include 16 jeeps or equivalent, 8 executive desks w/chairs, 8 clerical desks w/chairs, 10 filing cabinets, 6 bookcases, 8 electric typewriters, 12 electronic calculators, 1 copying machine and mimeograph machines.

d. Other cost funding to include part of in-country travel of local personnel, office supplies, data processing, printing and publications and other miscellaneous costs which are necessary for the successful operations of the project.

2. Agricultural Analysis, Planning and Evaluation Unit

a. Technical personnel services

Seventy man-months over the life of the project. It is anticipated that up to 3 months of these services will be provided by U.S. direct hire and the remainder will be provided

through a university contract or through PASA arrangements with the USDA.

These services will include: a resident agricultural economist, 24 MM, short term agricultural specialists with competence indicated by the initiatives undertaken by the GON, in response to the agricultural sector assessment now in progress, 46 MM.

b. Participant Training

A high level of technical training of the staff of this unit will be required for it to produce the type of programs and for its analytical and evaluative work to merit the respect and support of the highest levels of government. To further strengthen the high level staff which will be recruited initially, funding for the following training, throughout the life of the project is provided:

Academic U.S.		
Agricultural Economics	6 man years	$ 57,600
Animal Sciences	2 man years	19,200
Academic 3rd Country		
Plant Sciences	4 man years	24,000
Short term U.S.		
Project Development and Management	18 man months	24,000
	Total	$124,800

Scheduling of participant training is shown in Table No. 1, below.

c. Commodities**

Vehicles
Office furniture, and
Office machines

Initial requirements for AID financing include 4 vehicles, 7 executive desks w/chairs, 7 clerical desks w/chairs, 10 filing cabinets, 6 bookcases, 7 electric typewriters, 8 electronic calculators, 1 copying machine, 1 mimeograph machine and 1 desk computer.

d. Other cost funding to cover part of in-country travel of local personnel, office supplies, printing and publication, computer time and other necessary expenses required for the successful operation of the project.

** A detail of initial commodity requirements is included as Annex #2

TABLE #1

PARTICIPANT TRAINING

Type of Training	1974 MM	1974 $000	1975 MM	1975 $000	1976 MM	1976 $000	1977 MM	1977 $000	1978 MM	1978 $000	Total MM	Total $000
Agricultural Statistical Unit												
U.S. Academic												
Agricultural statistics	24	19.2	24	19.2	12	9.6	12	9.6			72	57.6
U.S. short term												
Agricultural statistics			16	21.2	12	15.9					28	37.1
Computer programming			6	8.0	6	8.0					12	16.0
Sub-total	24	19.2	46	48.4	30	33.5	12	9.6			112	110.7
Agricultural Planning, Analysis and Evaluation Unit												
U.S. Academic												
Agricultural economics	24	19.2	24	19.2	12	9.6	12	9.6			72	57.6
Animal sciences					12	9.6	12	9.6			24	19.2
Third Country Academic												
Plant sciences	24	12	24	12.0							48	24.0
U.S. short term	9	12	9	12.0							18	24.0
Sub-total	57	43.2	57	43.2	24	19.2	24	19.2			162	124.8
TOTAL	81	62.4	103	91.6	54	52.7	36	28.8			274	235.5

TABLE #2

IMPLEMENTATION TARGETS

Type and Quantity

	1974		1975		1976		1977		1978		Total	
	MM	$000	MM	$000	MM	$000	MM	$000	MM	$000	MM	$000
Agricultural Statistical Unit												
Technical Advisory Services												
U.S. Direct	½	2	1	4	½	2					2	8
Contract/PASA	9	36	9	36	8	32	6	24	4	16	36	144
Participant Training	24	19.2	46	48.4	30	33.5	12	9.6			112	110.7
Commodities		67.3		7.0		7.0		7.0		3.0		93.3
Other Costs		7.0		7.0		7.0		6.0		1.0		28.0
Sub-total		131.5		102.4		81.5		46.6		20.0		384.0
Agricultural Analysis, Planning and Evaluation Unit												
Technical Advisory Services												
U.S. Direct	1	4	1	4	½	2	½	2			3	12
Contract/PASA	16	64	16	64	15	60	12	48	8	32	67	268
Participant Training	57	43.2	57	43.2	24	19.2	24	19.2			162	124.8
Commodities		2.9		3.0		3.0		3.0		2.0		13.9
Other Costs		3.0		3.0		3.0		2.0		1.0		12
Sub-total		117.1		117.2		87.2		74.2		35.0		430.7

continued on next page ./ . . .

Table #2 continued ./ . . .

	1974		1975		1976		1977		1978		Total	
	MM	$000	MM	$000	MM	$000	MM	$000	MM	$000	MM	$000
Summary U.S. Inputs												
Technical Advisory Services												
U.S. Direct	1½	6	2	8	1	4	½	2			5	20
Contract/PASA	25	100	25	100	23	92	18	72	12	48	103	412
Participant Training	81	62.4	103	91.6	54	52.7	36	28.8			274	235.5
Commodities		70.2		10.0		10.0		10.0		7.0		107.2
Other Costs		10.0		10.0		10.0		8.0		2.0		40
Total U.S. Inputs		248.6		219.6		168.7		120.8		57.0		814.7
GON Inputs		439.5		385.5		410		427		440		2024.5
Total Project Inputs		688.1		605.1		578.7		547.8		497.0		2839.2

4. Rationale

This project is designed as a follow-on project to the agricultural sector analysis undertaken by the GON in CY 1972. Gaps in statistical data series required for continuous planning purposes were immediately identified as one of the most serious constraints to sector analysis, plan formulation and the judicious allocation of resources. Institutionalization of the data gathering activity into a single unit within the GON will provide a central source of data for the Ministry of Agriculture and other institutions and will contribute to the elimination of a major bottleneck to efficient program planning. It will also provide continuity to the analysis and planning process initiated with the sector analysis study group in 1972.

Under the present institutional set-up there is a department of census and statistics in the Central Bank of Nicaragua. Plans to create an independent census and statistics institution in January 1973 were postponed as a result of the December 1972 earthquake. Present plans are to give this division of the Central Bank independent status in January 1974. The agricultural statistics group will form a part of this body. Until this time, no provision has been made for collecting primary agricultural statistics. Previous efforts have concentrated on industry, commerce and services, except for those of the previously mentioned FAO statistician who worked with the Central Bank.

The GON is committed to development of both analytical and planning institutions which will provide a sound basis for the allocation of public resources to encourage development in the rural sector. The process was initiated in CY 1972 with the formation of a staff to conduct an agricultural sectoral analysis and prepare a development plan. Implementation of this project will make it possible to provide the basic statistical information required to identify various alternatives for the allocation of public resources and to increase the GON capability to develop programs and projects which could maximize both social and economic benefits from the investment of public resources.

The potential benefits to a developing society of improved effectiveness in gathering and utilizing agricultural statistics is suggested in recent research. *** Peterson and Hayami measured the social benefits of increasing the accuracy of agricultural statistical reporting by the USDA and their results indicated that each dollar invested in increasing the accuracy of statistics from the 2.5% to the 2% level of error, returns more than $600 worth of benefit to society. The researchers also theorized that in many developing countries where the accuracy of the existing statistical estimates is substantially less than those used in the U.S. illustrations, the social returns from improvement in the statistical system may be even higher than those found in the U.S. study.

Although not specifically applied to Nicaragua, the above mentioned research suggests that the potential for pay off in social and economic benefits from this project is very favorable. In any case, improved reliability of data is an essential first step to providing a basis for assessing alternatives. Furthermore, in discussions with high level representatives of the Ministry of Agriculture, the Mission has been assured that it is the intent of the GON to utilize and to expand upon competence

---

*** Conducted by Willis Peterson and Yujiro Hayami, Annual Report - 1972, Economic Development Center, Department of Economics, Minneapolis; Department of Agricultural and Applied Economics, St. Paul University of Minnesota; supported by the Minnesota Agricultural Experiment Station and a grant from the Rockefeller Foundation.

developed in the performance of an agricultural sector analysis through the formation of an analytical and planning service for the agricultural sector.

GON budgetary allocations for CY 1974 for the activities supported by this project are presently estimated at ₵3,076,500 (equivalent to $439,500). This amount should be increased each year until 1979, when the project would be 100% locally financed.

Among the conclusions emanating from the "Seminar/Workshop on Employment and Income Distribution with Special Reference to Agriculture and Rural Development",**** was one directing attention to the need for baseline data against which to evaluate new programs. This program in conjunction with the sector analysis is designed to provide baseline and follow-up data, as well as analytical capability in order to allocate public resources for rural development more effectively and to measure progress achieved by such investments.

5. Course of Action

Principal implementation actions have been identified and time phased in the implementation schedule which follows:

**** Held in Columbia, Maryland, December 11-13, 1972.

IMPLEMENTATION SCHEDULE
1974

Dec. 1973	J.	F.	M.	A.	M.	J.	J.	A.	S.	O.	N.	Dec.

Activity	Schedule
1. Funding authorized	SSSSSSSSSSSS 1/ AAAAAAAAA 2/
2. Project Agreement negotiated & signed	SSSSSSSSSSSSS AAAAAAAA
3. GON staff recruited	SSSSSSSS AAAAAAA
4. Establish office	SSSSSS AAAAA
5. Negotiate contract/PASA for U.S. technical assist.	SSSSSSSSSSSSSSSSS AAAAAAAAAAAAAA
6. Procure commodities	SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS AAAAAAAAAAAAAAAAAAAAAAAAAAAAA
7. Participant training programed & participants selected	SSSSSSSS AAAAAA
8. Plan of work developed	SSSSSSSSS AAAAAAAAAA
9. Enumerators recruited and trained	SSSSSS SSS
10. In-service training of personnel	SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
11. Collection & tabulation of primary ag. statistics 3/	SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
12. Analysis, evaluation & planning of rural dev. activities 4/	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

1/ Agricultural Statistical Unit "SSSSS"

2/ Agricultural Analysis Evaluation and Planning Unit "AAAAA"

3/ Number, timing and content of surveys will be treated in development of annual work plans. These will be responsive to stated needs of the analysis and planning section.

4/ Development of project priorities will be responsive to findings of the sectoral analysis and reflected in the development of annual work plans.

AID 1023-1A (7-71) (NARRATIVE DESCRIPTION)

PROJECT NO. 524-11-140-105 | SUBMISSION ☒ ORIGINAL ☐ REVISION (Number) | DATE 10/18/73 | PAGE 18 of 23 PAGES

Logical Framework

Funds AG

AGRICULTURAL PLANNING AND STATISTICAL SERVICES

Goal	Measures of Goal Achievement	Means of Verification (Initial Obligation FY 74)	Assumptions for Achieving Goal Targets (Final Obligation FY 78)
To assist the GON plan, organize and implement long-term development activities.	A. Data collection institutionalized. B. Rural development projects and programs developed, financed and implemented to overcome constraints identified by sector analysis. C. Implementation of institutional, budgetary and policy changes, identified in the agricultural sector analysis, as necessary to overcome constraints to development.	A. Statistical institute established and functional. B. A subjective review of projects and programs implemented to overcome constraints identified by sector analysis. C. A subjective review of institutional, budgetary and policy changes resulting from analysis and planning activities.	A. The country will enjoy sufficient political stability to permit long-term development. B. The GON will pursue policies which tend to favor long term development.

AID 1025-1A (7-71) (NARRATIVE DESCRIPTION)

PROJECT NO. 524-11-140-105 | SUBMISSION ☒ ORIGINAL ☐ REVISION ____ (Number) | DATE 10/18/73 | PAGE 19 of 23 PAGES

Project Purpose	Conditions that Will Indicate Purpose Has Been Achieved	Means of Verification	Assumptions for Achieving Purpose
A. To establish within an appropriate entity of the GON, a unit which will collect the agricultural statistics required for rural development planning; and B. To develop within an appropriate agency of the GON an analytical, planning and evaluation unit for the rural sector.	A. A 5 man professional staff with 34 sub-professional and supporting personnel in place, trained, operational and fully financed by the GON. B. An 8 man professional staff with 19 supporting personnel in place, trained and fully financed by the GON.	A. Personnel in place and supported by budget line items. B. Same as A above.	A. The GON is prepared to support on a continuing basis programs and projects which contribute to rural development. B. The GON is prepared to implement organizational and policy changes when such changes are indicated by sound analysis of pertinent data. C. The GON will assign competent personnel and provide budgetary support for both data gathering and analytical and planning activities. D. Central government, autonomous and semi-autonomous agencies concerned with the agricultural sector will cooperate with the statistical and analysis and planning units.

AID 1025-1A (7-71) (NARRATIVE DESCRIPTION)

PROJECT NO. 524-11-140-105 | SUBMISSION ☒ ORIGINAL ☐ REVISION (Number) | DATE 10/18/73 | PAGE 20 of 23 PAGES

Project Outputs	Magnitude of Outputs	Means of Verification	Assumptions for Achieving Outputs
Agricultural Statistical Unit			
A. Increased scope, accuracy and timeliness of primary current agricultural data. B. A series of national and regional estimates of crop production and livestock inventories. C. Special studies as needed by the agricultural analysis, planning and evaluation unit.	A. and B. 1. 1974 a. National estimates of production of rice, corn, beans, sorghum. b. National inventories cattle and hogs. 2. 1975 a. National estimates and forecasts of production rice, corn, beans and sorghum. b. National estimates cotton, coffee, sugar, bananas, tobacco. c. National inventories cattle and hogs. 3. 1976 a. National and regional estimates and forecasts of production for rice, corn, beans and sorghum. b. National and regional production estimates cotton, coffee, sugar, bananas and tobacco. c. National and regional inventories cattle, hogs. d. Disposition estimates basic grains. 4. 1977 a. National and regional estimates and forecasts basic grains and export crops. b. National and regional estimates livestock.	A. through C. Published data and calculated sampling errors.	A. Primary source data will be available to enumerators. B. A nucleus of trained personnel will be available for initial staffing from the Central Bank. C. Budgetary support to provide planned staffing and operations, will be available on a timely basis.

continued on next page . / . . .

AID 1025-1A (7-71) (NARRATIVE DESCRIPTION)

PROJECT NO. 524-11-140-105 | SUBMISSION ☒ ORIGINAL ☐ REVISION (Number) | DATE 10/18/73 | PAGE 21 of 23 PAGES

continued from previous page . / . . .

Project Outputs	Magnitude of Outputs	Means of Verification	Assumptions for Achieving Outputs
	c. National estimates specified fruits and vegetables.		
	5. 1978 a. National and regional estimates and forecasts of basic grains, export crops, and specified fruits and vegetables. b. Semi-annual national and regional inventories livestock.		
	C. As required to meet the needs of the agricultural analysis, planning and evaluation unit, beginning in CY 1976.		

AID 1025-1A (7-71) (NARRATIVE DESCRIPTION)

PROJECT NO. 524-11-140-105 | SUBMISSION ☒ ORIGINAL ☐ REVISION (Number) | DATE 10/18/73 | PAGE 22 of 23 PAGES

Project Outputs	Magnitude of Outputs	Means of Verification	Assumptions for Achieving Outputs
Analysis, Planning and Evaluation Unit			
A. National program for development and conservation of renewable natural resources. B. Evaluation of government policies affecting rural income distribution and recommendations for policy changes. C. Evaluation of rural employment problem and development of recommendations to reduce unemployment in rural areas. D. Develop plans for a program which will contribute to increasing the general level of farm management practices. E. Evaluation of GON programs directed toward increasing crop production (i.e., crop research, extension, production credit, etc.) and develop recommendations to upgrade these programs.	A. to F. The magnitude of these outputs are not readily quantifiable. Progress indicators will include project evaluations made, recommendations developed for project and program revisions and new projects or programs developed in cooperation with executing agencies. **Project Outputs**, cont. /... F. Evaluation of agricultural marketing systems and programs and development of recommendations, projects and/or programs to improve the efficiency thereof.	A. A subjective evaluation of analysis made. B. A subjective evaluation of project and program recommendations developed. C. Review of project and program revisions effected and new projects and programs implemented as a result of unit actions.	A. Primary source data will be readily available to enumerators. B. A nucleus of trained personnel will be assigned to and retained by this project from the agricultural sector analysis team. C. Budgetary support to provide planned staffing and operations will be available on a timely basis. D. There will be full coordination between the analysis, planning and evaluation unit and R. D. executing agencies.

AID 1025-1A (7-71) (NARRATIVE DESCRIPTION)

PROJECT NO. 524-11-140-105 | SUBMISSION ☒ ORIGINAL ☐ REVISION (Number) | DATE 10/18/73 | PAGE 23 of 23 PAGES

INPUT SUMMARY

	1974		1975		1976		1977		1978		Total	
	MM	$000	MM	$000	MM	$000	MM	$000	MM	$000	MM	$000
Summary U.S. Inputs												
Technical Advisory Services												
U.S. Direct	1½	6	2	8	1	4	½	2			5	20
Contract/PASA	25	100	25	100	23	92	18	72	12	48	103	412
Participant Training	8½	62.4	103	91.6	54	52.7	36	28.8			274	235.5
Commodities		70.2		10.0		10.0		10.0		7.0		107.2
Other Costs		10.0		10.0		10.0		8.0		2.0		40
Total U.S. Inputs		248.6		219.6		168.7		120.8		57.0		814.7
GON Inputs		439.5		385.5		410		427		440		2024.5
Total Project Inputs		688.1		605.1		578.7		547.8		497.0		2839.2

ANNEX #1

Proposed Budget

Analysis Planning and Evaluation Unit

	Monthly	Yearly
Personnel		
1 unit chief, macro economist	₡ 6,500	₡ 84,500
1 administrative assistant	3,500	45,500
1 agricultural economist-agricultural institutional specialist	6,000	78,000
1 agricultural economist, supply and demand	5,000	65,000
1 agricultural marketing specialist	5,000	65,000
1 renewable resources specialist	5,000	65,000
1 agricultural industries specialist	5,000	65,000
1 agricultural finance specialist	5,000	65,000
1 animal scientist	5,000	65,000
4 clerical assistants	3,000	39,000
2 bilingual secretaries	2,000	52,000
4 secretaries	1,500	78,000
8 chauffeurs	700	72,800
		₡ 839,800

continued ./ . . .

Other Costs

Office Materials and Supplies	₵ 60,000
Publicity and Public Relations	28,000
Travel	
1 Director 28 days at ₵50.00 each	1,400
2 Section Chiefs 60 days at ₵50.00 each	6,000
14 Supervisors 120 days at ₵40.00 each	67,200
14 Chauffeurs 120 days at ₵30.00 each	50,400
Office Furniture and Equipment	36,100
	$161,100
Vehicle Operations	
16 vehicles at ₵1,400 each/mo.	₵ 268,800
Rent of horses for 50 persons, 20 days at ₵20.00 each	20,000
Data Processing	40,000
Printing and Publications	40,000
Miscellaneous Other Costs	23,200
	₵641,100
Grand Total	1,672,700

ANNEX #1
continued ./ . . .

Proposed Budget

Agricultural Statistics Unit

	Monthly	Yearly
Local Personnel		
1. Permanent		
1 statistician, chief of agricultural statistics	₵ 5,200	₵ 67,600
1 section chief agricultural survey section	5,000	65,000
1 map statistician chief cartographic section	5,000	65,000
1 supervisor of agricultural survey section	2,500	32,500
1 supervisor cartographic section	2,500	32,500
2 secretaries	1,500	39,000
16 clerks	1,500	312,000
16 chauffeurs	700	145,600
		₵759,200
2. Temporary		
70 enumerators 120 days ₵30.00/per day ea.		₵252,000
14 guides 120 days ₵10.00/per day ea.		16,800
		₵268,800
TOTAL		₵ 1,028,000

continued ./ . . .

Other Costs

Office Materials and Supplies	₵ 60,000
Travel	
8 technicians at ₵50.00 each for 60 days	24,000
8 chauffeurs at ₵30.00 each for 60 days	14,400
Vehicle Operations	
8 vehicles at ₵1,400/monthly/vehicle for 12 months	134,400
Data Processing	70,000
Printing and Publications	25,000
Miscellaneous Other Costs	14,400
Office Furniture and Equipment	123,400
Vehicles	98,000
	563,600

Grand Total $1,403,400

ANNEX #2

COMMODITIES [1]

	Agricultural Statistics		Analysis, Planning and Evaluation	
	Number	Amount [2]	Number	Amount [2]
Vehicles	16	*$ 56,000	4	$ 14,000
Executive desks (210)	8	1,680	7	1,470
w/matching chairs (80)	8	640	7	560
Clerical desks (100)	8	800	7	700
w/matching chairs (60)	8	480	7	420
Metal Filing Cabinets (120)	10	1,200	10	1,200
Bookcases (60)	6	360	6	360
Electric Typewriters (720)	8	*5,760	7	5,040
Electronic Calculators (360)	12	*4,320	8	*2,880
Copying machine (1000)	1	*1,000	1	1,000
Mimeograph (250)	1	*250	1	250
Desk Computers			1	6,630

Summary:

Vehicles	$ 56,000	$14,000	$ 70,000
Office Furniture	5,160	4,710	9,870
Office Machines	11,330	15,800	27,130
	$ 72,490	$ 34,510	$107,000

[1] The above list of commodities are needed during the first year of project operations. Thereafter, the U.S. commodity input will be maintained at a level of about $7,000 for the Agricultural Statistics Unit and about $3,500 for the Analysis, Planning and Evaluation Unit.

[2] Only those items with asterisks will be financed by A.I.D.