

PROJECT EVALUATION SUMMARY (PES) -- PART I

1. PROJECT TITLE Equatorial Guinea Agricultural Development	2. PROJECT NUMBER 653-0001	3. MISSION/AID/W OFFICE USAID/Cameroon
	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <u>631-83-8</u>	

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING A. Total \$ _____ B. U.S. \$ <u>2,000,000</u>	7. PERIOD COVERED BY EVALUATION From (month/yr.) _____ To (month/yr.) _____ Date of Evaluation Review _____
A. First PRO-AD or Equivalent FY _____	B. Final Obligation Expected FY _____	C. Final Input Delivery FY _____		

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Mission must make a decision as to whether to accept the evaluation recommendations to change EOPS, commodity lists, and other aspects of current project, and should change project documents as necessary	L. Dominessy	12/83

BEST AVAILABLE

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS	10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT
<input type="checkbox"/> Project Paper <input type="checkbox"/> Financial Plan <input type="checkbox"/> Logical Framework <input type="checkbox"/> Project Agreement <input checked="" type="checkbox"/> Implementation Plan e.g., CPI Network <input type="checkbox"/> PIO/T <input type="checkbox"/> PIO/C <input type="checkbox"/> PIO/P <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Other (Specify) _____	A. <input type="checkbox"/> Continue Project Without Change B. <input type="checkbox"/> Change Project Design and/or <input checked="" type="checkbox"/> Change Implementation Plan C. <input type="checkbox"/> Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS (IF APPROPRIATE (Names and Titles)) Anatolio Ndong Mba, GREG Larry Dominessy, USAID Jeannette North, IHAP Thomas Wetzel, IHAP	12. Mission/AID/W Office Director Approval Signature <i>Ronald D. Levin</i>
	Typed Name Ronald D. Levin
	Date 9/30/83

EXECUTIVE SUMMARY

Date: August 17, 1983

Project: Equatorial Guinea Agricultural Development (653-0001)

Country: Equatorial Guinea

Period of Project:

I. What constraint did this project attempt to relieve?

This project has two components. The first component attempts to relieve the access to market constraint to increased production of coffee and cocoa.

The second component attempts to relieve supply and management constraints to increased egg and poultry production

II. What technology did this project promote to relieve this constraint?

The first component provided vehicles for cooperatives to facilitate the marketing of coffee and cocoa. The second component provided technical assistance to develop poultry management capabilities.

III. What technology did the project attempt to replace?

The project does not attempt to replace any established technologies. Vehicles have been used by cooperatives but were not generally available. The Poultry Production Center previously functioned under the Spanish.

- IV. Why did project planners believe that intended beneficiaries would adopt the proposed technology?

Vehicles had previously been used and cooperative members requested more. Poultry production had previously been practiced under the Spanish. Hence, due to their previous behavior it was thought that beneficiaries would adopt the proposed technology.

- V. What characteristics did the intended beneficiaries exhibit that had relevance to their adopting the proposed technology?

The fact that they had previously utilized the technology.

- VI. What adoption rate has this project achieved in transferring the proposed technology?

Vehicles have been "adopted" but not cared for due to lack of maintenance knowhow and spare parts. Counterparts working at Poultry Production Center have made good progress adapting management techniques. The problems have derived from inadequate supply of feed.

- VII. Has the project set forces into motion that will induce further exploration of the constraint and improvements to the technical package proposed to overcome it?

The vehicle component has not set forces into motion, but the Poultry Production Center has set forces in motion to address management and input-supply constraints to poultry production.

VIII. Do private input suppliers have an incentive to examine the constraint addressed by the project and to come up with solutions?

Yes, private input suppliers have an incentive to examine the constraint to the production of poultry feed. However, there are not many such suppliers.

IX. What delivery system did the project employ to transfer technology to intended beneficiaries?

The vehicles were given without an adequately designed delivery system which resulted in major difficulties for the project component. Poultry management technology was delivered by a poultry expert providing supervision of Equatorial Guineans and on-the-job training.

X. What training techniques did the project use to develop the delivery system?

On-the-job training, short-term training.

XI. What effect did the transferred technology have upon those impacted by it?

Vehicles have not increased production. It is too early to assess the impact of the poultry operation, though it has clearly increased the immediate supply of eggs and poultry.

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PRELIMINARY REMARKS

The first and preceding evaluation of the Equatorial Guinea Agriculture Development Project took place during June 1982, seventeen months following the signing of the original Project Agreement and two months preceding the signing of the amended Project Agreement. The Project Amendment leading to the amended agreement was based upon the findings of this first evaluation. The evaluation considered mainly the cooperative assistance component of the project. It pointed out several shortcomings of the vehicle maintenance capability of the cooperatives and made suggestions for its improvement. The subsequent project paper amendment provided additional inputs to rectify this situation, but failed to recognize the serious organizational problems which the cooperatives were facing. The vehicle maintenance situation degenerated so rapidly in the six months which followed the evaluation that it made the provisions provided in the project amendment inadequate to bring about any improvement.

The evaluation reported Government figures that indicated an increase in cocoa production during the first year the project funded vehicles were available. Though this increase in production could not be linked directly to the availability of vehicles, the evaluators stated that, "it is clear from interview data collected during the evaluation, that the vehicles had a large role to play in the increase." The evaluation team further stated, however, that records kept by the individual cooperative were not sufficient to confirm this increase. This judgement was based upon information from several interviews with cooperatives located near the capital city of Malabo and with GREG officials. Limited information was gathered because the travel situation in Equatorial Guinea is very difficult and exacerbated by the fact that the country is split into both an island and continental portions. The evaluation report stated that the project officer had visited cocoa, coffee, and horticulture farmers, but in fact he had visited only cocoa farmers.

The World Bank "Introductory Economic Report" on Equatorial Guinea completed in June, 1983, shows that while there was an increase in cocoa exports reported by the GREG between 1980 and 1981, they attributed this to the fact that "a few large growers and smallholders resumed cocoa cultivation." Their summary tables show that cooperatives are responsible for only 24 percent of the area under cultivation thus making it difficult to draw conclusions from national export production figures. During the current evaluation period a high percentage of the cooperatives were visited in the course of the design of the new Cooperative Development Project to be undertaken by the Cooperative League of the USA. It was readily apparent that many cooperatives had ceased functioning as productive units for reasons including lack of capital, credit, internal organization, markets, and appropriate technology. Inquiries about production trends generally showed a worsening situation. It was this realization that led USAID/Yaounde to re-examine the cooperative situation in terms of a new major project focusing solely upon cooperative needs.

X. Summary Evaluation Findings/Recommendations

The following lists the major evaluation findings and recommendations, which are discussed in detail in the evaluation report.

X.i Findings

1. The vehicles provided to the cooperatives are distributed over the island and mainland of EG. Most of the vehicles are not operational due to mechanical failures, lack of spare parts, and lack of tires. Vehicles have not been properly maintained and have been used primarily for purposes other than those anticipated. Moreover, they have not appeared to have increased agricultural production (see Summary section).
2. The GREG has been able to provide a constant supply of poultry feed to the project to date, but now faces a problem due to foreign exchange constraints. Current supply of feed will be exhausted by the first week of September, 1983 (see Summary section).
3. PPC has been a successful venture and is producing eggs and chickens, at a rate approaching project target (see Section 18).
4. Extension efforts to assist small farmers establish small commercial flocks have not been undertaken due to lack of a sure feed supply (see Summary section and Section 17).
5. Feed grain system as proposed in the Project Paper has not been developed. Only cassava is available in sufficient quantity to be used for feed. Grain mill and feed mixing machine have not been installed (see Section 16).
6. Project has attempted to increase island's flock of rustic birds instead of establishing small commercial flocks (see Sections 16 and 23).
7. There have been serious problems with the pricing and marketing of eggs and poultry (see Summary section and Attachments 1, 2, and 3 to report).
8. Cooperative component of the project should have included technical assistance to improve maintenance and usage of vehicles (see Section 16).

X.ii Recommendations

1. Since the amended Equatorial Guinea Agricultural Development Project will end at the same time as the CLUSA Cooperative Agreement, and since the projects will be coordinated, it is recommended that the EOP for the vehicle component be changed to be the same as the CLUSA EOP, namely, the establishment of a transportation system that can be operated by the cooperatives. (see Section 18).
2. Change the commodity list in the amended cooperative component of the project to include only those items which the CLUSA Cooperative Development project could reasonably manage and control. Do not purchase coffee hulling machinery (see Section 23.1).

3. Poultry component should focus its attention on developing Center's extension services, while maintaining its egg/poultry production activities. Extension should focus on rustic poultry, rather than commercial production (see Section 23.2).

4. Poultry Production Center should expand its vegetable production activities and consider other small farmer activities. (See Section 23.2).

5. Corn trials should be conducted by the Poultry Production Center using improved varieties provided by IRA in Cameroon (see Section 23.2).

6. If a new supply of feed does not arrive and the current poultry flock must be sold, it is recommended that a future supply of feed be used to re-establish a flock at the PPC. If feed is not forthcoming after the re-establishment, and the flock again has to be sold, it is recommended that the PPC not be re-established until a source of continuous feed can be identified (see Section 23.2).

7. Poultry Production Center should explore the possibility of small farmer production of their local feed. (See Section 23.2e).

8. The Poultry Production Center should explore the possibility of small farmer activities such as root crops, pigs, goats, and rabbits. These farmer activities were recommended when the original project was designed but were rejected as too ambitious at the time. The experience of the IHAP technician as well as the preliminary analysis of the evaluation team has indicated that this idea might be reconsidered at this time and that its feasibility should be explored in more detail during the drafting of the project supplement to this project. Some analysis is contained in Section 23.2f of this evaluation and further analysis is recommended. (See Section 23.2g)

9. Personnel changes and additions should be made to implement recommended plan of action (See Section 23.2i).

13.1 The Equatorial Guinea Agriculture Development Project has two components, assistance to coffee and cocoa cooperatives and development of poultry production on the island of Bioko. These two elements are distinct from one another and necessarily will require separate analysis. However, some underlying assumptions made in project development relate to both and these will be indicated when appropriate.

13.2 The Agriculture Development Project Paper was approved on December 30, 1980, and the Project Agreement was signed on January 13, 1981. The project paper subsequently was amended on September 20, 1982, and the Project Agreement was amended on September 24, 1982, extending the project PACD to December 31, 1985, providing additional funds, and expanding the activities of the original project.

13.3 This project is the first development project undertaken by USAID in Equatorial Guinea. USAID/Cameroon was under considerable pressure to design and implement almost immediately a project which would show United States support for Equatorial Guinea. The time constraint was further exacerbated by the lack of a permanent USAID presence in the country, the absence of an American Ambassador, a devastated economy, a lack of information upon which to base judgment, and a relatively low level of development assistance with which to work. Under these circumstances, the project designers determined that the best type of project to design was one with high visibility and immediate impact. After discussions with the Government of Equatorial Guinea, it was determined that the distribution of vehicles would be the most appropriate way to have an immediate impact, hopefully achieving also some development goals, and that the poultry component would be an appropriate way to start a small focused development activity. A marathon effort was made to procure and deliver American trucks to Equatorial Guinea and the trucks arrived only five months following the signing of the project agreement. They achieved their short term objective of showing American goodwill but began experiencing some problems when placed within the longer term goals of assisting the cooperatives alleviate their marketing constraint.

13.4 Important assumptions made at the time of the design of the original project, based on the information available at the time, included the assumptions that the chief marketing constraint faced by small farmer producers was transportation, that vehicle maintenance would not present any difficulty since the cooperatives had previously owned and maintained their own vehicles, that MINALRD would be able to maintain and control a spare parts inventory, and the MINALRD would be able to manage the sale of the vehicles to cooperatives and manage a special account from the proceeds of these sales. As the project implementation proceeded, it became clear as more information was gathered about the situation in the country that these assumptions were not true. USAID made an effort to ameliorate the maintenance problems by sending a Louis Berger mechanic to the field, and began addressing the other constraints to production in the amended project which proposed the distribution of commodities including small farm tools, fungicides, and coffee processing machinery. At the time of the evaluation, these commodities had not yet been distributed because the condition precedent, the establishment of Special Accounts and Board, had not yet been met.

The vehicles were distributed over a wide area both on the island portion of Equatorial Guinea, Bioko, and the mainland, Rio Muni. The evaluation team saw only one of the vehicles during the evaluation and this vehicle was parked near MINALRD. However, the USAID project officer, who was a member of the evaluation team, has seen most of the vehicles in his extensive travels in Equatorial Guinea during the previous six months. His observations are the following:

1. Most of the vehicles are not operational for reasons of major mechanical failure.

2. Only one vehicle observed was in mint condition and receiving meticulous care. Several were receiving somewhat less than satisfactory maintenance, and most were receiving no serious maintenance.

3. Except for one vehicle, all vehicles had various combinations of missing parts, broken springs, damaged bodies, missing air cleaners, completely worn tires and broken windows.

4. Most vehicles had not received regular oil changes or lubrication and several were found to have crankcases overfilled by about 5 liters of oil (oil dip stick levels are written in English and many of the operators mistakenly took an indentation on the dip stick appearing 5 inches from the marked "Full" line on the stick as the full level indicator).

5. All vehicles had 2 to 4 times the mileage recorded on them than would normally be expected for the amount of agricultural productive activities in which they had been engaged. In all cases the vehicles were being used as a passenger service to the major population centers of Bata and Malabo either on a rental basis or under the control of the vehicle operator.

6. In two cases vehicles were found to be removed from the cooperatives and placed under the control of an area governor.

7. Replacement tires delivered with the vehicles had disappeared and spare parts were scattered about, removed from boxes, and in many cases unidentifiable.

8. Most cooperatives lacked the resources and the ability to maintain the vehicles.

9. No cooperative had been informed of an official sales arrangement with MINALRD and no special account or finance committee to manage the special account had been established.

As stated in the preliminary remarks, it cannot be shown with certainty that the vehicles had any effect on agricultural production. In the long run constraints to increased agricultural production are much more diverse and complicated than the introduction of transportation vehicles. Among these appears cooperative organization, cooperative management, availability of inputs, control of pests and diseases, availability of credit, and marketing.

13.5 In relative terms the poultry component of the Agricultural Development Project was quite successful in comparison with the agricultural cooperative component and with other development projects in Equatorial Guinea. Although a major purpose in the project, the involvement of 100 small farmers in the commercial production of eggs and poultry, is not being pursued, more appropriate alternatives have been selected. An important assumption in the project, and a promise extracted from the GREG as a condition precedent to disbursement of USAID funds, was that the GREG would provide a continuous supply of feed for the poultry industry created by the project. As of the writing of this evaluation, the GREG has not defaulted on its promise to provide the Poultry

Production Center (PPC) at Easile with adequate imported chicken feed although it appears there will be a disruption by early October. Feed provided to date has come from several deliveries of an initial \$100,000 order of feed placed by the GREG to the Canary Islands as partial satisfaction of the Condition Precedent. Project personnel have been very cognizant of the GREG's dire economic and financial conditions and its great difficulty in finding adequate foreign exchange reserves to purchase any imported commodities. Equatorial Guinea has no industrial sector except for some small woodworking businesses and essentially must import its entire need in manufactured commodities. With limited exports of coffee, cocoa, and timber, the result is crisis purchasing of critical needs as supplies run low or are exhausted.

The poultry technical advisor estimates that the current supply of chicken feed will be exhausted by the first week of September, 1983. The PPC has requested MINALRD to make a currency conversion from local currency reserves which the PPC has for the importation of 10 additional months of poultry feed and replacement chicks. Although MINALRD believes they are on the verge of obtaining the authority to make this conversion and they already have proformas from the Canary Islands for the purchase of the feed, they are doubtful if the necessary ocean transport could be arranged before the current supply is exhausted. The PPC has made plans to progressively decrease their bird population with the objective of stretching the time until the entire poultry operation is closed down. It is under these conditions that the PPC and the MINALRD have been reluctant to assist small farmers in the creation of small commercial poultry flocks. To be economical, these flocks would require confinement which would require a constant supply of poultry feed, in this case imported poultry feed.

The project paper stated that there were many locally available materials which could be used for the fabrication of feed including animal bones, palm cake, egg shells, corn, cassava and fish meal. In fact, only cassava is available in sufficient quantity to be considered for use in feed, and this could be used for only a maximum of 20% of the mixture. The project purchased a commercial sized grain mill and feed mixing machine with anticipation that local feed production would become a reality although there were no particular plans for this in the project paper. At the time of this evaluation neither the grain mill nor the feed mixer had been installed. Also an insufficiently sized generator was purchased to power the equipment and this included only the generator, not the engine which was assumed to exist but was later found to be defective. Although this equipment was inappropriate for the project as originally designed the evaluation team feels the PPC should pursue trials in corn production which may eventually make this equipment useful.

What the poultry component has done is a commendable job of putting the PPC back into production after a decade of abandonment. At the time of the evaluation the PPC was producing eggs and poultry at a rate approaching that specified in the Project Paper. Egg production was at an acceptable rate and level, the birds were in excellent condition and losses from disease and mis-management were minimal. In fact, success was so profound and the demand so great, that both the PPC and MINALRD planned using all available resources to double the size of the operation. The evaluators asked why this would be chosen over provision of inputs to small farmer producers. Generally the response was there was not much confidence that small farmer operations could use the scarce inputs as efficiently as the PPC and the lack of confidence that even a continuous supply of inputs could be made available to the farmer.

The alternative the PPC has followed in lieu of encouraging small farmer commercial flocks is to increase the island's flock of rustic birds (i.e. chickens which are not confined and freely forage for their own food). The rustic bird being introduced also appears to grow a bit larger than other breeds already existing on the island. The general procedure is for the PPC to receive day-old chicks from fertilized eggs provided by and hatched at poultry facilities financed and managed by Spanish technical assistance to MINALRD. These facilities contain incubators provided by the USAID agriculture development project and the price paid by the PPC for the chicks takes this into consideration. The PPC raises the chicks until approximately 2 months of age, an age at which they can fly and adequately escape danger, and then sells them to any interested parties both in Malabo and in villages scattered about the island. PPC personnel attempt to make distribution equitable by taking them to distribution points in Malabo and in villages. Hens are sold for higher prices than cocks to encourage preservation of the hens for reproduction. The evaluation team made a tour of the island and saw project-provided birds in most villages it visited, however, the density of birds found living in Malabo was far greater to that found in small villages. The project-provided birds seemed both healthy and well adapted. Insufficient base data, distribution records and follow-on records existed to make calculated estimates of actual impact, but the visual impression was that a significant number of project birds were populating the island. Whether this had resulted in a total increase in bird population on the island is impossible to say, but the impression is that it has.

13.6 Another important assumption made in the design of the project was that prices for chickens and eggs would continue to be freely determined in the market. In fact, at the time of the writing of the project paper, there were so few eggs and poultry available in the market that a deduction could not be drawn that pricing and marketing were freely determined. In fact, pricing and marketing have not been freely determined during project implementation, resulting in a major project crisis which had not yet reached its final resolution at the time of the evaluation. The evaluation team feels that the situation is sufficiently significant and instructional that it has included attachments 1, 2, and 3 to this evaluation report which fully explain what happened and what is being done to resolve the problem. Basically, pricing and marketing of eggs and broilers has not followed a system that either would cover production costs or assure that there is equal access to PPC products by the general population. A detailed survey was not conducted to determine the nature of recipients of PPC products because it was felt inappropriate since Project Implementation Letter No. 9 (see attachment no. 3) concerning this topic was being delivered to the Minister of MINALRD during the evaluation and he did not have time to react. However, the project officer felt that GREG would make a positive response and the situation should be examined again after one or two months. In general, it appears that a disproportionate quantity of poultry products are made available to government offices or higher government officials (see Attachment 1).

The GREG decided to control egg prices in part to assure that eggs were within the financial reach of the majority of the population. Although the PPC is required to sell eggs at 100 BK (32¢) each, they are rarely available at official outlets and are seen in abundance in the central market at 2 to 3 times

this price. In an attempt to control sales of poultry and eggs directly from the PPC which is outside established sales outlets, the PPC created a special flock of broilers entitled "The Presidential Reserve" to place a limit on birds leaving the PPC for this purpose. Also, to minimize direct requests to the PPC for eggs from government offices and government officials, the MINALRD decided to become one of the official outlets for eggs. It is expected that the GREG will examine these policies in view of the contents of Project Implementation Letter N° 9.

13.7 A final remark should be addressed to the condition precedent in the original project agreement which required the GREG to give official status to the PPC as an "autonomous" organization. This has led to considerable confusion as various project players have given their interpretation of what was originally desired. In fact, the PPC has relied upon the MINALRD for its original donation of poultry feed. It continues to rely upon the Ministry to effect currency conversions and to import inputs. The PPC has learned that pricing and marketing require the sanction of the GREG. Likewise, USAID placed some requirements for equitable marketing and financial soundness, and required that the PPC provide extension services. In effect, the PPC is being pulled in many directions and the time is appropriate to define the PPC in terms of a formal charter, its organization and its mode of operation.

14. EVALUATION METHODOLOGY

This is the mid-project evaluation of the Equatorial Guinea Agricultural Development Project, which is specified in the Project Amendment N° 1, dated August, 1982. The purpose of this evaluation is:

- 1) to assess the progress in achieving the project's objectives within the context of the project environment and constraints;
- 2) to make recommendations on project priorities and a plan of action for the remaining two years and five months of the project.

The evaluation was conducted through:

- 1) Discussions with the Secretary General of the Ministry of Agriculture, Livestock and Rural Development (Mr. Anatolio Ndong Mba), IHAP's Project Technical Advisor (Mr. Thomas Wetsel), the U.S. Ambassador to Equatorial Guinea (Ambassador Alan Hardy), and the General Manager of the Poultry Center.
- 2) Visits to the Poultry Production Center, the Malabo market, the Spanish experimental farm, and a tour of the island to get visual impression of the number of project-provided (rustic) birds populating the island and to make rough assessment of the possibility of growing quality corn on the island.
- 3) Review of the project files.
- 4) Visits to cooperatives which have received a project funded vehicles.

15. EXTERNAL FACTORS

There have been no major changes in the project setting or in host government priorities which have had an impact on the project. Equatorial Guinea still faces the serious foreign exchange reserve problem and currency convertibility problem it had at the time of the design of the project paper. The major difficulty, as has been discussed in the Summary Section, is the invalidity of many of the assumptions made. Although the evaluation team was impressed with the operation of the commercial farm at the PPC and hopes that the GREG will continue to be able to honor its commitment to provide a supply of poultry feed, it does not believe sufficient grounds exist to make this an assumption. In the year preceding this evaluation, USAID/Yaounde identified the shortcomings of the cooperative development project with the Cooperative League of the U.S.A. which will, in part, provide the necessary technical assistance and supervision to ensure proper maintenance and control of trucks and pickups provided under the Agricultural Development Project. This, as well as the evaluation team's recommendations for the improvement of the poultry component of the project, will be discussed in the final section of this report which will address planned and suggested modifications which could improve project performance.

16. INPUTS

There has been very little difficulty with the provision of inputs as outlined in the project paper and its amendment. The major difficulty with inputs has been the lack of essential services which must accompany these inputs to make them effective.

For example, a major input to the poultry component is a grain mill and mixer. This equipment had not yet been installed at the time of the evaluation due to the lack of a large generator to power them. This generator is not budgeted for in the current project and a decision must be made as to whether funds in another category of the project should be rescheduled for this purpose. Moreover, it is pointless to have the grain mill and mixer when there is not an adequate supply of local grains available to produce poultry feed.

The GREG has had great difficulty providing one of their major inputs, namely a constant supply of feed. They may be unable to maintain this supply due to their dire economic condition and their concomitant lack of foreign exchange. It is quite likely that a rupture of this supply will occur and result in the poultry operation to be at least temporarily terminated.

The cooperative component of the project lacks the very important input which has been the determining factor in the successes of the poultry component: technical assistance. The cooperative component delivered trucks and pickups to cooperatives that lacked the capacity to adequately maintain and control the vehicles. The vehicles were delivered with absolutely no instruction in their operation and maintenance. The cooperatives were ignorant of even basic maintenance procedures such as knowing the level of oil in the engine crankcases. As a minimum, the project should have provided a full time maintenance specialist and trainer. The project never created a spare parts ordering and control system. The original spare parts delivered with the vehicles were inadequate.

It would be very difficult for this part of the project to succeed as designed. At the time of the evaluation USAID/Yaounde was in the process of restructuring it and integrating this project component into its new Co-operative Development Project which will be implemented through an OPC to the Cooperative League of the U.S.A. (CLUSA). All future provision of inputs to cooperatives funded under the Agriculture Development project will be controlled by technical assistance members of the CLUSA team.

17. OUTPUTS

The revised project output for the poultry component in the amended project paper is stated as follows:

Functioning Poultry Production Center at Basile producing eggs and poultry meat, providing training, extension and marketing services to small farmers and capable of meeting its own demand for chicken feed.

The following table gives the progress-to-date against projected output targets:

<u>Outputs</u>	<u>Progress to Date</u>
400,000 eggs sold	269,210 eggs sold
8,000 chickens sold	6,138 chickens sold
15 trained extension agents in place	2 trained
Trained PPC General Manager	on-the-job training in progress but will still need further formal training
96 small farmers trained	-0-
150 small farmers receiving regular visits by extension agents	-0-
PPC facilities repaired	75% complete
Equipment installed at PPC	90% installed
Model small farmer production facility built at Basile	constructed

The poultry component has been quite successful in developing the Poultry Center as a producer of eggs and poultry meat made available to the population via the market and as a training site in poultry production skills for the center's staff.

Four chicken houses have been refurbished by the project funds and the residence of the poultry advisor and the office complex have been repaired.

Repair of the electrical and water systems has been started and the PPC has been whitewashed or painted. Poultry equipment has been installed in three buildings. A contractor is currently scheduled to install the feed mill. The appointment of the General Manager was delayed for a year, but the individual finally appointed is qualified and actively manages the center. Farm workers have been involved in weekly training sessions. Short courses have been given in chain saw use, poultry rearing, layer management, vegetable gardening, and feed handling and storage. Two technicians have taken a three week training course in poultry management in Puerto Rico. Moreover, a model small farmer poultry production unit was constructed utilizing local materials.

The project has not yet developed the PPC as a center for poultry extension services for small farmers, the activity that most directly would affect the project goal of improving the small farmers' incomes. Development of this activity has been hampered significantly by the inability to identify a source of poultry feed for the small farmers, the heavy demands on the Technical Advisor's time in establishing and operating the poultry farm due to the logistical difficulties and the delayed appointment of the Center's General Manager.

The Center's main poultry extension activity so far has been the distribution of rustic chickens that are sold to villagers around the island. Since poultry feed is not readily available to the small farmers, the Center has focused its attention on repopulating the island's rustic birds that were considerably depleted during Macias' rule. These birds are better adapted as scavengers than the highly productive imported birds and can survive without the need for poultry feed. The Center is distributing an improved breed of rustic birds (a bit larger than most existing ones), which are hatched in project-funded incubators from fertilized eggs obtained from a Spanish development assistance project. Based on the evaluation team's observation during the tour of the island, these project-provided birds seem to be reaching the far corners of the island and seem to be in healthy condition. The Center has also made extension visits to specific small poultry producers, and has provided medicine and debeaking services.

The Center has been involved, as an unplanned activity, in providing extension services in vegetable gardening. Vegetable gardens first were developed because of the need for food for the Project Technical Advisor and his family. Because a ready market existed in Malabo, the Technical Advisor helped the Center's workers to establish their own commercial gardens adjacent to the PPC. This was done as a means to augment their salaries and improve their interest in the PPC. The Technical Advisor has provided both seeds and advice. A vegetable garden for the Center was also developed, the proceeds of which were used to pay for the Center's fuel and operational needs until poultry production began. Subsequently, the Center was involved in providing seeds and extension services to 120 young women for their gardens at the neighboring girls school in Basile. Also, the Center's workers, themselves, have assisted their relatives in starting vegetable gardens.

For the cooperative assistance component of the project, no more than 5 of the original 23 vehicles provided are operational and providing services to the cooperatives.

18. PURPOSE

The project purpose is to increase small farmer productivity by:

- removing marketing and production constraints faced by coffee and cocoa producers through provision of coffee processing machinery, vehicles, fungicides, and hand tools; vehicle spare parts, and technical assistance to the cooperatives that serve them, and;

- increase on-farm production of poultry meat and eggs through the development of the Basile Poultry Production Center.

18.1 The first End of Project Status (EOPS) condition stated that the amount of cocoa and horticulture produce marketed by the small farmer cooperative members would increase 300% by the end of the 1984/85 crop year and the amount of coffee marketed would increase by 100% during this period. Although records are insufficient to verify the judgement, discussions held with a wide variety of cooperatives and an examination of a World Bank economic summary of Equatorial Guinea show that to date, there has been a decrease in production thus far in the project. The decrease is attributable to many production factors including unavailability of inputs, lack of labor, lack of credit, pests, low soil fertility, poor management, fuel shortages, and poor markets. The production increases expected could never be achieved without a concentrated effort in both capital and technical assistance which is well beyond the scope of this project. In fact, at the time of the writing of this report, most project vehicles were not operational. The CLUSA Cooperative Development Project, if approved, will assist in taking the first step toward making these vehicles operational by repairing at least 6 of them and incorporating them into centralized service centers on both the mainland and the island. The evaluation team recommends the EOPS be changed to coincide with the CLUSA EOPS: "establishment of a transportation system that can be operated by the cooperatives".

18.2 The second EOPS condition requires that by the end of 1985 approximately 150 small farmers will be making a net profit of 15% on their investment in poultry production. As has been discussed in this evaluation report, the poultry production center has made no effort to involve small farmers of commercial poultry production ventures, due to the lack of a feed supply system. Hence, this EOP has not been achieved. As discussed in the summary and recommendations sections, it is not feasible to pursue this objective due to the likelihood that feed will not be forthcoming. Rather, it is recommended that the current program of increasing the number of rustic birds on the island should be continued. As a consequence, the second EOPS should be changed to reflect this new emphasis.

19. GOAL/SUBGOAL

The project goal is to increase the income of small farmers. To date, the evaluation team could find no evidence that this has actually occurred. The larger population of rustic birds would indicate some general increase in the welfare of the general population, although these recipients so far have been mostly other than small farmers.

Attachment N° 4 is a report on a project field trip completed by the project officer during December, 1982. It contains

many remarks pertinent to the actual use the cooperatives have made of the vehicles assigned to them. In summary, all vehicles, except those that were put out of commission shortly after arrival in Equatorial Guinea, have considerable mileage and have been used primarily for general personnel and commodity transport. Although limited use of vehicles has been made for the agricultural productive activities described in the Project Paper, one can say that the recipients have derived benefits from the vehicles which have improved their general welfare only in the short, but certainly not in the long run. Reasons for this limited attainment of the project goal have been discussed in other parts of this evaluation.

20. BENEFICIARIES

20.1 As defined in the Project Paper, the project would benefit "approximately 2,500 small farmers cooperative members and their families by removing the chief constraint, transportation, to increasing their production. The project (would) also benefit approximately 150 small farmer families who receive visits from the Poultry Production Center extension agents or participate in the Center's training program." The number of cooperative members who have actually received benefit is difficult to estimate since during the evaluation period and 6 months prior to it, most of the vehicles were non-operational. The project officer's observations during the previous year are that many people have benefited from the vehicles, but only a small percentage of this has been focused on the increase of production of coffee and cocoa. The vehicles have served as a general transportation service, often being rented for the purpose of transporting people to and from the major cities of Bata and Malabo. Associated with this has been the transport of various commodities to and from central market areas to include bananas, root crops and other marketable items. At least two trucks have been under the direct control of a regional governor and were used for their official as well as unofficial use.

20.2 In the poultry component, 150 small farmer families did not benefit from the project as was the original intention of the Project Paper. The poultry component has evolved around the commercial production of eggs at one large center rather than production at many lesser small farmer centers. The project has produced a goodly supply of poultry and eggs which have been available almost exclusively to the residents of the capital city of Malabo. An adequate distribution system has yet to be devised and it appears that various government offices as well as individuals some how connected with the Poultry Center have easier access to poultry products at the established government prices. Eggs are freely available in the market, but at 2 to 3 times the official price.

20.3 A large number of 2 month old rustic birds have been distributed on the island either directly by the project or through Spanish technical assistance efforts using USAID project funded incubators. These rustic birds are quite apparent on the back streets of Malabo and to a much lesser extent in small villages scattered about the island. Poultry Center personnel have made many visits to villages, taking and filling orders, and providing advice. Although this type of activity was not foreseen in the project, given the conditions that exist, it seems to be a logical choice and is reaching a large and general population.

20.4 People in the village of Basile near the Poultry Center and students at the girls' school adjacent to the Poultry Center have benefited from the extension work in vegetable production offered by the poultry advisor at his own initiative.

20.5 The result of egg and poultry production has been an increase in the nutritional level, particularly in the city of Malabo where most of the products have been sold and animal proteins are generally scarce. The long-term effects are not predictable since the current difficulty with poultry feed shortages threatens to terminate poultry, egg, and chick production at the PPC, soon negating any progress made.

21. UNPLANNED EFFECTS

21.1 A very important unplanned effect is that the GREG has had to examine its role in establishing price controls on food items. USAID's intervention to require the GREG to consider production cost will certainly have an effect on such future considerations as the Equatorial Guinea economy evolves.

21.2 A second unplanned effect is that it has become very evident that the cooperatives have very limited capabilities. Many assumptions made by the GREG and USAID on the outset of the project have proved grossly incorrect and both parties have had to examine the real requirements for their improvement.

21.3 Another unplanned effect has been a very profitable program of vegetable production adjacent to the PPC. This was first begun as a food supply and was later commercialized as a ready market was found in Malabo. Vegetable gardening has begun to increase in Malabo as friends and relatives of the PPC's workers, who were the original beneficiaries of the program, have learned of the technology. The evaluation team has recommended this successful extension activity be expanded.

22. LESSONS LEARNED

The evaluation team concluded that the following are lessons learned from the project experience:

22.1 In a country with complex and very serious economic conditions, it is unlikely that severe constraints to production can be easily relieved simply by the provision of commodities.

22.2 Token amounts of development assistance given for basically political purposes and incapable of having any real developmental impact either should not be undertaken, or should be undertaken with the political goals clearly stated rather than couched in the unrealistic development objectives demanded by the AID project documentation, such as the logical framework.

22.3 Marketing and pricing issues should not be left to chance or ignored by making an assumption.

23. RECOMMENDATIONS FOR FUTURE PROJECT ACTIVITIES

23.1 Cooperative Component of the Project

23.1a The evaluation team recommends that the commodity list under the amended project paper be changed to include only those items which the CLUSA Cooperative Development Project could reasonably manage and control. World Bank coffee specialist, Dr. Arthur O. Ballantyne, who completed a study on Equatorial Guinea in December, 1982, reviewed the Agriculture Development Project Paper Amendment and took issue with the statement that "coffee producers are unable to market a large part of their crop because machinery needed to hull and clean coffee beans is not readily available". Dr. Ballantyne stated that "the inability of the farmer to shell his coffee in no way reduces its marketability although shelling would increase its value". He also stated that on the mainland the World Bank team estimated that "there are 6000 tons of commercial (coffee) shelling capacity, 90% unused because at present all the coffee harvested, i.e. 95%, is being sold to Gabon and Cameroon where payment is made in CFA and where consumer goods are available". The evaluation team recommends against the purchase of coffee hulling machinery unless it is advised by the CLUSA technical assistance team. Also, the team suggests the commodity list be modified to include those commodities and technical assistance which would dovetail with the Cooperative Development Project.

23.1b The evaluation team recommends that USAID continue its plan to dovetail its activities with the scheduled CLUSA Cooperative Development Project. Specifically, the team recommends the following:

(i) The project budget be revised to provide two mechanics who will also serve as maintenance and driver trainers for a period of one year each. They will assist in the operation of the service centers to be established under the Cooperative Development Project.

(ii) Funds be allocated and purchases proceed for a complete supply of maintenance tools and equipment for the two service centers.

(iii) Commodity inputs such as fungicides, coffee processing equipment, and hand tools be examined to determine what quantities can actually be controlled and monitored by the Cooperative Development Project and the items to be purchased be modified accordingly.

(iv) Additional funds be allocated for vehicle spare parts.

23.2 Poultry Production Component

23.2a During the design of the original project, consideration was given to include also extension activities in rabbits, swine, and sheep. This idea was rejected because it was felt that chances for project success would be much greater if activities were concentrated on the sole activity of poultry. However, experience in the project has shown that large scale activities, such as a commercial poultry farm, require a continuous and substantial provision of inputs which the economy of Equatorial Guinea will be unable to support for the foreseeable future. It now appears a more appropriate approach would be to encourage small farmers to incorporate a small livestock or gardening activity with their normal activities in order to improve his diet and to allow a small excess for sale. Inputs, besides seed and starting breeding stock, are found locally such as fertile soils (to be placed under sound management) and wild grass and plants to be used as animal feed. All activities would necessarily remain small and the failure of

any one particular small activity would not jeopardize the program.

This approach meets the approval of the GREG who would like to build upon progress thus far made in the Agriculture Development Project and in its relationships with USAID. The American Embassy would like to see the technical assistance presence continue since it feels the project has provided a positive indicator of U.S. support for the GREG and has provided a parameter against which it can measure economic development efforts of the GREG. Finally, IHAP is very much interested in continuing its program in Equatorial Guinea. An orientation away from a large scale production facility will be necessary if it is to be justified in keeping a full time technician in Equatorial Guinea.

23.2b This plan of action for the remainder of the project is recommended for several reasons:

- 1) The project technical advisor is now better able to focus his attention on developing the Center's extension services since:
 - the Poultry farm is established and operating;
 - the Center's General Manager is capable of managing the poultry farm, with some advisory assistance from the Technical Advisor.
- 2) The emphasis on developing the extension services and widening the scope of these services will, more directly, address the project's unmet goal of improving the incomes of the small farmers.
- 3) There is a need to develop more activities besides poultry production at the Center, since the future of the poultry farm as a commercial operation is uncertain because of poultry feed supply problems.
- 4) The extension services will have a longer-term effect on improving dietary levels of the population and incomes of the small farmers, while the Center's current egg/poultry production activity meets an immediate need.
- 5) Resolution of the poultry feed problem must be accomplished in the next two years if the GREG is to continue with commercial poultry production as begun in the Project.

In summary, the recommended activities in the poultry component for the remainder of the project include:

- 1) Continuation of the PPC's egg and poultry production -- as long as feed is available;

- 2) Development of the Center's extension services to small farmers in:
 - a) Poultry production;
 - b) Corn promotion for local production of poultry feed;
 - c) Other food crops and livestock production.

23.2c PPC Egg and Poultry Production

Recommended future activities for the PPC's egg and poultry production facilities vary depending on the future prospects of obtaining poultry feed. If feed can be supplied on a continual basis, the Center's aim is to increase the production of eggs and chickens which are to be sold according to a pricing and marketing scheme developed by the MINALRD, and approved by the Center's Board of Directors and USAID. At the time of the evaluation, however, the poultry farm had nearly depleted its supply of poultry feed (with 29 days of feed remaining) and an order for a new shipment of feed and chicks was still awaiting GREG approval of a foreign exchange conversion. This left the possibility that when this order of feed and chicks does arrive, it could be well after the present feed is depleted and all the Center's chickens are sold.

To stretch the existing feed in order to maintain as many birds at the farm as possible, the Project Technical Advisor has recommended that a phase-out plan should be adopted immediately. This would entail the selling of a specified number of birds per week, starting with the broilers, followed by the less productive layers, the rest of the layers, and leaving the breeding stock for last. In this way, the feed could be stretched to last until November. This would also avoid the necessity of attempting to sell the whole flock of 3,000 chickens at one time which the country's market could not absorb.

If the new shipment of feed and chicks arrived on schedule, there would be sufficient inputs to double production at the Center and last for a period of 10 months. If this were to happen, building n° 1 at the Center would have to be refurbished and house an additional 1100 birds.

Should the more probable event occur that this new shipment arrive sometime after August, this new supply could be used either to build up the Center's flock from whatever birds remain or to repopulate the farm. Egg production would be considerably delayed, as hens do not begin egg production until they are at least five months old.

Since the current order of feed could last only 10 months, the Center soon would be faced again with obtaining more feed. This may or may not be a problem depending on the Government foreign exchange situation. Should feed not be forthcoming and the Center's flock have to be sold again, the evaluation team suggests that the Center's poultry production activity not start again until a source of continuous and adequate supply of feed can be identified. One possible source is the poultry farm/poultry feed production project to be established in Bata by the African Development Bank. The Project has recently been approved and an advance party is scheduled to arrive in Equatorial Guinea within 30 days. Should the project be successful, poultry feed will be available to the Center within two years.

23.2d Extension Services

Poultry Extension Services

These services can still be provided even if the Center's poultry production actually ceases operation due to lack of poultry feed. The evaluation team recommends that these poultry extension services include:

- a) Continuation of the hatching and distribution of rustic birds to small farmers in Bioko. These rustic birds are an improved breed currently being hatched in project funded incubators from fertilized eggs obtained from a Spanish development assistance project. This breed is a bit larger than most existing rustic birds. They also are better adapted as scavengers than highly productive imported birds and can survive without need for poultry feed.

Since the MINALRD and the Spanish farm also distribute some of these rustic birds, it is necessary that this distribution effort be coordinated. Therefore, the distribution process can be properly recorded for monitoring and evaluation purposes.

- b) Continuation and expansion of the extension visits made to small poultry producers, including the provision of medicine and de-beaking services.
- c) An annual vaccination program of all chickens on the island of Bioko.
- d) Poultry disease identification.
- e) Monitoring the distribution, care, growth, and number of chickens being raised on the island.

23.2e Extension Services in Corn Production

Since imported poultry feed is not available to the small farmers, the evaluation team recommends that the Center explore the possibility of small farmers producing their own local feed.

The first step would be to determine whether adequate small-scale production of corn is feasible on the island. As discussed earlier in the evaluation report, it is suggested that corn trials over a period of one year be implemented on various parts of the island. Based on the three crops produced in that year, an assessment can be made of the feasibility of producing corn, what variety are best, and what areas of the island are the most suitable. Fungicides would be used, but fertilizer would be used only on a limited basis because of importation difficulties and its unavailability to farmers. The evaluation team saw small plots of corn at various places on the island and generally the corn appeared in good condition (see attachment 5 for observations by maize breeder Dr Jay Chung). Dr Chung felt that the rich volcanic soil of the island in combination with proper rotations of leguminous crops would make corn production

possible. The excessive wet climate would limit this production to a time of the year when both sunlight and rainfall were sufficient.

Should small-scale corn production be deemed appropriate, the second step would be for the Center to provide extension services in corn production and its conversion to poultry feed, including training programs, provision of seed, and monitoring corn growth and feed processing. The Center would not be involved in any marketing or pricing schemes for corn.

23.2f Extension Services in Small Livestock and Food Crops

The Center's extension activities beyond poultry and corn production would concentrate on improving the productivity of the small farmer's existing livestock and food crop activities. Extension services could be offered in vegetables, root crops, pigs, goats and rabbits. The feasibility of these services must be further analyzed during the drafting of the project supplement.

23.2g Before extension services can be offered, a thorough assessment must be made of the livestock and food crop production activities on Bioko island and a determination made of what activities could be improved through extension services. This assessment would entail:

- 1) Identification of the agricultural activities currently being undertaken on the island, what activities are doing well, and what activities are doing poorly. This identification should be conducted by the Project Technical Advisor along with the island's agricultural extension agents and the MINALRD.
- 2) Research on those agricultural activities not performing well and identification of methods for improving their productivity that could be promoted through extension services. This research would be conducted using available literature as well as visits such as to the International Institute of Tropical Agriculture in Ibadan, Nigeria, or the Institute of Agricultural Research in Cameroon by the Project Technical Advisor and a member of the MINALRD.

23.2h Once the assessment is completed, and the problem areas and possible extension activities identified, the agricultural extension agents would need to be trained in the various areas identified for extension work. Training would be done at the Center through demonstration crops and livestock raising, conducted by the Project Technical Advisor. Several of these extension agents also would receive 2-3 weeks training at the International Institute of Tropical Agriculture in Ibadan. They, in turn, would provide training courses to small farmers in the villages and provide them with various services such as provision of new varieties of seeds and medicines, and vaccinations for livestock.

A scheme for measuring the impact of this extension service should be developed to assess what improvements have been made. Such measurements would include a count on the distribution and survival rate, the increase in livestock population, and so on. The Center would not be involved in any marketing or pricing activities for these food crops and livestock.

23.2i Personnel

To implement the recommended plan of action for the remainder of the project, the following personnel would be required:

Project Technical Advisor - Expatriate

The PTA would concentrate his attention on the development of the Center's extension services in corn production and in other food crops and livestock. He would be responsible for assessing the small farmer livestock/food crop situation on the island, instructing and working with agricultural extension workers, MINALRD and organizing corn trials. With a member of MINALRD, he would visit Cameroon and Ibadan for instruction in conducting corn trials and for other technical information in crop production. The PTA would also serve in an advisory role on the Center's poultry production and poultry extension activities.

Short-Term Consultants

The PTA would be assisted by short-term consultants from Cameroon and Nigeria, who would make periodic visits to the Center. These consultants would be specialists in corn production and other specific livestock and foodcrop production.

23.2j Extension Agents

The actual extension work would be done by the existing extension agents of MINALRD. One poultry extension agent is based at the Center. In order to assure their mobility about the island needed to perform their extension work, the project may need to provide motorcycles for these agents. Provision for the maintenance, spare parts, and fuel for these motorcycles must also be considered.

23.2k General Manager of the Center

The General Manager would manage the operation of the poultry production center and supervise the poultry extension activities conducted by the Center's extension agent, all with advisory assistance from the PTA.

FINANCES

The recommended plan of action for the remainder of the project would be financed by funds remaining in the cooperative agreement and by part of the funds available in the project's Amendment N° 1 budget. An assessment would have to be made on what funds remain in the cooperative agreement and what portion of these remaining funds are already obligated. This might vary depending on whether the poultry farm will continue operation. The evaluation team has determined that there is \$172,000 available in the Project Paper Amendment budget that could be used for the poultry component's ongoing activities and recommended new extension activities up to December 1985. Of this \$80,000 is allocated for a year's extension for the Poultry Specialist. The remaining \$92,000 was determined based on items in the Amendment budget that was felt could be re-allocated. These items are:

Poultry Feed	\$50,000
Feed mill installation, other facility repair work	\$17,000
Two participants in livestock pro- duction	<u>\$25,000</u>
Total	<u>\$92,000</u>

The installation of the feed mill should still be considered which will require the purchase of a generator. Since the PPC has decided that it is more effective to import chicks for layers and most broilers, it is no longer necessary to maintain a reserve feed supply for breeders. Should the new supply of feed and chicks arrive before the end of August, funds will be needed to refurbish building n° 1 to house the additional chickens. However, it is highly unlikely this will occur, and these funds therefore could be used for extension services instead. Training will occur as an integral part of the activities to be undertaken in extension activities.

23.21 Immediate Actions to be Taken should the Recommended Plan of Action for the Remainder of the Project be Approved

Should the evaluation team's recommended plan of action be approved, IHAP would develop an initial proposal for the implementation of the remainder of the project, based on the team's recommended project activities and on the funds available for this poultry component.

If USAID/Yaounde approves IHAP's initial proposal, IHAP would then send an agricultural specialist to Equatorial Guinea to work with IHAP's Project Technical Advisor (Thomas Wetsel) and the MINALRD in developing a detailed project design and budget for the remainder of the project. This specialist would confer with USAID/Yaounde on the tentative design and budget developed. IHAP would send an official project design and budget for USAID/Yaounde's consideration and approval.

Memorandum

TO : See Distribution

DATE: June 9, 1963

FROM : Mr. Larry J. Dominessy, AARDO

SUBJECT: Notes on my field trip to Equatorial Guinea - June 4 to June 8.

The Scenario: The following is my impression of the series of events in Equatorial Guinea which have led to the current dilemma in the pricing and marketing of eggs produced by the poultry production component of the Equatorial Guinea Agricultural Development Project.

The production of eggs at Basile began when the laying hens were approximately 4 1/2 months old, about one month earlier than poultry advisor Tom Wetsel had anticipated. Tom had hoped that the Board of Directors for the Poultry Production Center (PPC) would produce a marketing plan before production began, but was caught in a predicament when production began early and no plan was available. He knew the board did not meet regularly and a plan would not be developed in the immediate future. He therefore decided the PPC would begin marketing eggs in the central market at 150 Bk per egg until a more formal arrangement could be established. Tom felt this his prerogative since the PPC was supposed to be an autonomous center, 150 Bk roughly equated to the production cost of an egg, and it made good common sense. Tom rented a booth at the market and had his workers begin sales. At the beginning he was marketing 700 to 800 eggs a day and these were being sold in from 5 to 10 minutes in batches of between 10 to 60 eggs. The sales were orderly and generally the same group of 15 to 20 people were buying the eggs. Many of these people immediately began to resell at the market at prices that began at 350 Bk per egg and eventually settled to 200 to 250 Bk. This system operated about 25 days. During this period the Board met several times and declared that Tom had gone behind their backs in setting up a system for egg sales and establishing a price on eggs.

When Tom realized there was resistance building concerning the price he had set, he went to see the Ambassador Hardy. Tom explained he was tired of battling the issue of egg prices. The Ambassador said he would support Tom on the issue and said he wished to discuss it with the Board of Directors. The Board, headed by the Director of Agriculture, Mr. Locuna, declared it did not have authority to meet with the Ambassador. The Minister of Agriculture then contacted the Ambassador and said he wanted a meeting with him and Tom to discuss egg pricing.



The meeting lasted over an hour and consisted mostly of the Minister giving ultimatum. The Minister's point was that the pricing of commodities such as eggs was the Government's responsibility and that Tom had no authority to make such decisions. The Ambassador went into an argument about equating prices with production cost. The Secretary General for Agriculture replied that the PPC had no production costs since all of its facilities and inputs were either granted by the Government or USAID and therefore the price of eggs was irrelevant. The Minister added that these were difficult times in Equatorial Guinea, that wages were low and that there were social and political consideration to be taken into account when pricing eggs. The Ambassador's remarks were not listened to seriously and the meeting seemed designed as an opportunity to discipline Tom in the Ambassador's presence. The Ambassador had another engagement and had to excuse himself whereupon the Minister ended the meeting by saying that the price of eggs was no longer a topic of discussion. He added that he did not want to continue the procedure of the PPC selling eggs in the market since the eggs were being resold at higher prices, and that eggs henceforth would be sold for 100 Bk each. He then instructed Tom and Locuna to immediately design a new marketing scheme. Later that day (and on several other occasions) the Ambassador met with the Secretary General of Agriculture who had been present at the meeting to make clear that the pricing question would eventually have to be resolved to USAID's satisfaction and that he had better explain that to the Minister.

Tom's enthusiasm had vanished and although he followed Locuna to his office, he did not participate in designing a new marketing scheme. In 15 minutes Locuna decided he would market the eggs through bars and restaurants reasoning that those were places where people went to eat anyhow. For the next two days Tom and Locuna went to bars and restaurants taking orders for eggs. The bar and restaurant owners were as much surprised and dazed as anyone and obviously did not have any prior collaboration. The owners were instructed that they would buy and sell the eggs for 100 Bk each and for their profit in every lot of 30 eggs they would be given 2 free eggs. The system was abandoned in a few days.

During this difficult time Tom talked with the Ambassador and then decided to radio Yaounde for assistance. Meanwhile the Board of Directors met to take advantage of the dilemma to develop their own marketing scheme. Over a weekend they developed a marketing scheme, prepared a study of production costs to show that 100 Bk was an adequate egg price, engaged a lawyer to create a constitution for the Board, and hired a secretary to write the official minutes of the Board meeting when these documents would be discussed. The new marketing scheme would involve sales booths at locations throughout Malabo with eggs provided by the PPC at 100 Bk per egg (with the usual 2 free eggs per 30). Most of these booths were owned or operated by family or relatives of the Board members. To eliminate the PPC being harassed by government officials coming to the farm for eggs, the Board, with Tom's support, instituted a system where by the Minister of Justice was allocated two days production out of seven to establish a booth for sales of eggs to high government officials as befits their rank and responsibility.

Following the presentation of the Board of the new marketing scheme, Tom made his second radio call to Yaounde to inform USAID that the Board had made a serious effort to resolve the marketing problem and he was downgrading the crisis from critical to serious. By this, he meant for USAID to interpret his message as meaning that it was not necessary for USAID to come on the next airplane, but they should come at least within the next two weeks. He did not realize that Cam Wickham had his plane ticket in hand and cancelled his trip because of his message.

Tom left Malabo on vacation about 8 days later. His relationships within the Ministry of Agriculture were at a low ebb. He was unable to get the Ministry of act on renewing his exit visa which also the Ambassador was unable to do. He finally left the country without the visa.

During Tom's absence the poultry farm went through several crises. An infestation of bees, management problems, and harassment from government officials wanting chickens and eggs directly from the farm, lowered morale and lowered egg production. Some loyal employees at the farm took the initiative to put special marks on eggs delivered to the Minister of Justice's egg booth to see if they would reappear at the market place at marked-up prices. They did appear and when the employees went to the Minister's house to inform him, they were chased out. A few days following the coup attempt, an official from the protocol office called on the farm for 6 chickens and 90 eggs. When the employees refused to serve him, he accused them of being disloyal to the government upon which they handed 6 laying hens and the eggs. When Tom returned, reported egg production had slipped 30 per cent and the agricultural ministry was glad to see him return.

The price of eggs: When it was apparent that eggs marketed through the Minister of Justice's egg both were making their way to the central market at marked up prices, the PPC stopped deliveries although with some protect by the Minister. To satisfy this political need, Tom suggested that the eggs be marketed through the Ministry of Agriculture. This accounts for 2/7ths of the eggs produced. I visited the central market in Malabo and found eggs in plentiful supply and being sold by a large number of small vendors at prices of either 200 or 250 Bk each. No authorized booth exists in the central market. The PPC stamps all of its eggs with "CEPAB" (the name of the Center) and stamps a date on them. By looking at the date Tom was able to determine that the Ministry of Agriculture was well represented at the central market. Also several dozen unmarked eggs were noted. These are stolen eggs and are probably the tail end of activities of some of the laborers on the farm which Tom fired shortly after returning.

On Monday, March 6, I met with the Secretary General of the Ministry of Agriculture to discuss the issue of pricing and marketing of eggs. I began the discussion by making the following points:

1. Tom Wetsel was a poultry production specialist and not necessarily a pricing and marketing specialist. Correspondingly, if he dwelled in the area of pricing and marketing he did it with no particular expertise and if he made errors the Ministry should not be too critical of his decisions.

2. I explained I was aware of the many of the details of happenings of the previous several weeks over the pricing and marketing of eggs. I said that I was not so particularly concerned about what events had occurred but what the end results were. I explained what USAID expected of accountability of goods, commodities and funds in any project and how this applied to the Basile Project. I specifically added that USAID's interests were not to impose unpleasant constraints, but instead to examine the long term needs of the project and to make suggestions that would guarantee its longevity.

3. I explained that USAID would not accept a marketing system that included the Ministry of Agriculture or any other government organization as a wholesaler or retailer of poultry and eggs produced at the PPC. I also explained that USAID only would be agreeable to a pricing system that was based on production cost. The Ministry of Agriculture could not impose a price that was below production cost and an acceptable profit margin.

In fact the market value of eggs appears to be from 200 to 250 Bk. This already is a considerable decrease from the 350 Bk value that existed shortly after the PPC began marketing eggs. I am certain the GREG's concern (and not just the Minister of Agriculture) is that this long anticipated, constantly observed, and highly visible effort of the government to provide a food commodity to the people culminates in the product becoming available at an affordable price. A lot of eggs are being produced (2000 a day), and in a country with so many needs, everybody is attempting to get their share. In an attempt to at least institutionalize favoritism, and end harassment of workers at the PPC, it was decided to open the Minister of Justice's egg booth. It was a poor idea and ineffective choice (see annex 3 for a list of unauthorized sales at the PPC). Likewise, the current arrangement of sales through the Ministry of Agriculture is a poor alternative. From my discussions, I doubt very much if any of the top three individuals in the Ministry of Agriculture have any personal financial interest in the sale of eggs. The political risks are too high. In fact, the president of the country wrote a letter to the Minister of Agriculture expressing his concern that actions be taken to prevent government officials from using their influence to make unauthorized removals or purchases directly from the poultry farm.

Although this evolution of events has been agonizing for those involved and those observing, from any experience in project involvement, I find it neither highly unusual or damning. Several key mistakes were made, a battle was fought, the participants are weary and ready to compromise. Specific errors are the following:

1. Marketing of eggs should never have been started without a written marketing system and pricing policy being established by the Board of Directors and accepted by the Ministry of Agriculture (the project implementer) and USAID (the funding source). Tom did what he thought was most logical when eggs began to appear a month early and the Board of Directors had not yet developed a marketing scheme for which they had been tasked - he took eggs to the market and sold them at the central market for what he thought was an appropriate price. The eggs

were immediately bought out by middlemen who doubled the selling price and openly marketed them. The ensuing crisis of unfair pricing, whatever its origin, resulted in the Minister of Agriculture picking his most likely scapegoat, Tom Wetsel, who was operating on his own with absolutely no Equatorial Guinean to pass the blame. When Tom realized the Board of Directors would not be able to produce a marketing and pricing scheme in time to begin egg sales, he should have obtained written approval of his provisional plan from the Minister of Agriculture before marketing eggs. Without this, he should have stacked the eggs in a large room until some action was taken. In other words, he should have covered himself in what would become the most critically important day in an egg production project - the first day of egg sales.

2. Tom should have been insistent in his call for help to USAID, particularly when he knew he was involved in a crisis that was beyond his capacity. Also, USAID should have been more careful in judging the gravity of Tom's problem.

However, there were somethings that were done right and done well. The dialog with the Ministry of Agriculture was maintained, tempers were constrained, people conducted themselves in a diplomatic fashion, and alternatives were constantly being searched. In fact, this was done so well that it may have been fortuitous that USAID did not enter the picture at the middle of the crisis when opinions were frozen. By the time I entered the crisis, all sides were sufficiently burned and wearied that they were glad to have an outsider make impositions so that could all save face. I would be amiss not to give Tom Wetsel great praise for his cool nerves even when he inextractably puts himself in the worse of circumstances.

In my discussions with the Secretary General of Agriculture on June 6, the following resulted:

1. He said the Ministry anxiously awaited the arrival of Cam Wickham to help them resolve problems of marketing and pricing.
2. Egg prices should be keyed to production costs.
3. Eggs should not be sold through the Ministry or any other government organization.
4. Egg prices, once established, should be enforced. The suggestion I made which he said he would discuss with Cam Wickham is included in annex 1 to this memo.

Some Additional Remarks: At this point I think we should be careful in our interpretations of what we mean by "autonomy" of the PPC. The GREG is fully aware the PPC is to be "autonomous" and freely uses the word when discussing the Center. However, the Project Agreement does not deal with the issues of marketing, pricing and policy formulation per se. In fact, it only states that the PPC will have "administrative and financial autonomy" while in the same breath giving implementation responsibility to the Ministry of Agriculture and requiring that the Ministry keep the PPC afloat by assuring that the PPC have "a

continuous and adequate supply of poultry feed to meet the PPC's requirements". Both USAID and the Ministry of Agriculture have their hands and money in the operation of the PPC and I am not certain what autonomy means. If the center had financial autonomy it would fold by November because it will be impossible for it to get foreign exchange to import feed without the Ministry's help. It would also now owe the Ministry about \$90,000 in foreign exchange in payment for the feed it has already received.

Also, I would like to remark that regardless of all the bad publicity the poultry project has received, in fact it is next to miraculous and held in awe in Equatorial Guinea as their first real project that worked. In about 1 1/2 years, under the worst of conditions, the project has turned a wrecked poultry center into an operating facility with 7,000 birds (layers and broilers) and producing 2000 eggs a day which are available in abundance in the market. We also have developed excellent relationships with the Ministry of Agriculture and GREG officials have gained considerable on-hands experience in project implementation. This is probably better than average results for an AID project.

The Pull-Out of all EEC Volunteers from Equatorial Guinea: The EEC volunteer program in Equatorial Guinea was launched as an emergency assistance program and was never either officially organized and designed as a project. The project never had specific written goals and objectives that were negotiated with the GREG. The volunteers (7 on Rio Muni and 1 on Bioko) were under the administrative control of the EEC coordinator in Malabo, but in fact the administration was so poorly defined that the volunteers reported to or were directed by either the coordinator in Malabo or the EEC area representative in Yaounde, whichever one was the most convenient. The volunteers were young, inexperienced, performing undefined roles and receiving little if any guidance from their EEC program coordinator. As a result, most of them were involved in self-created activities, most of which had limited value, few of which the Ministry understood or were unaware. The Ministry of Agriculture complained to the EEC that the project was producing no benefits for Equatorial Guinea and they viewed the volunteers as unqualified to be involved in the activities for which they were brought.

The EEC had established a bank account for the project under the control of the Ministry of Agriculture and all disbursements had to pass through the Ministry. The Ministry viewed the money as theirs and complained it was being wasted by the EEC since disbursements were continuing and no visible results were being achieved. The EEC developed a hard-line attitude and was unwilling to negotiate a solution with the Ministry. The GREG began to accuse the volunteers of selling project equipment in Cameroon and many of the volunteers were put under police escort or surveillance. The EEC sent a representative to Bata to evaluate the project (and the situation) and was accompanied by the Director of Agriculture (who was later implicated in the coup attempt and arrested)

who went into tyraid in front of the volunteers and surrounding people, denouncing them and their work. The volunteers were all removed from Equatorial Guinea shortly thereafter by the EEC.

DISTRIBUTION

DIR, R. Levin
D/DIR, B. Wilder
PRM, H. Miller
PRM, C. Wickham
FDE:S. Scott
ARD:G. Bittner
E.G. Committee members:
CONT:B. Deolazo
MGMT:M. Yoshioka

Draft:ARD:LJDominessy:bt

Annex: Suggested Marketing Scheme

I believe the selling price for eggs should be based on production costs plus a small profit margin. Even though the market price is higher, the objective of the PPC is to "provide a supply of eggs and poultry meat to the Equatorial Guinean population" and not "to get rich". The GREG wants the lowest possible prices to enable allow the greatest percentage of the population possible to benefit from the results of the project.

I suggest the following marketing scheme. The PPC operate from 1 to 3 booths for the entire day and offer eggs at the government established price (i.e. production cost plus small profit margin). Since the demand is greater than the supply, the booths will regulate the number of eggs they sell to an individual so the booth will have eggs available during the entire day. The number of eggs per sale and number of booths open can be regulated to ensure eggs are available the entire day. This should help eliminate the reselling of eggs at higher prices. At least it will make eggs available to all at an established price. Sales to restaurants could be done in greater number, but only to what is logically their needs for their daily operation.

As egg production increases and supply equals demand, the PPC can leave the retailing business and become a wholesaler to private distributors.

34

Weekly Egg Distribution

	No. of Eggs
Catholic School next of CEPAB	120
Workers of CEPAB	660
Tom Wetsel	20
Village of Basile	360
Ministry of Agriculture	3,000
Egg selling booths of Malabo	9,840
	<hr/>
	14,000

UNAUTHORIZED EGG AND FEED SALES DONE DIRECTLY FROM THE PPC

Paul Pablo Lyonga - Director of Agriculture
 Lacuna - Director of Livestock
 Angle - Sec of State, Min. of Agr.
 Anatolio - Sec. General, Ministry of Agr.
 Miguel - Minister of Agriculture

DATE	SOURCE OF REQUEST/ SIGNED BY	ITEM	PAYMENT
31 Aug.	Military farm/Angel	6 nests	no
24 Nov.	Spanish TA farm/Lacuna	11 sacks feed	no \$
29 Nov.	Spanish TA farm/Spanish advisor	6 sacks feed	no
30 Nov.	Presidency/Anatolio	1 sack feed	no
11 Dec.	Presidency/Angel	2 sacks feed	no
20 Dec.	Spanish TA farm/Lacuna	12 sacks feed	no
1 Jan.	Unknown/lacuna	10 sacks feed	no
10 Jan.	Spanish TA farm/Lacuna	12 sacks feed	no
10 Jan.	President's wife/Lacuna	10 sacks feed	no
12 Jan.	Board of Directors member/Lacuna	10 sacks feed	no
1 Feb.	Military farm/Lacuna	3 sacks feed	no \$\$
19 Feb.	Morrocan soldiers/Lacuna	90 eggs	yes
19 Feb.	Board member of CAPAB/Lacuna	8 sacks feed	no
19 Feb.	Presidency/L-cuna	50 eggs	no
Feb.	Morrocan soldiers/Miguel	700 eggs	yes
21 Feb.	Spanish TA farm/Lacuna	2 sacks feed	no
3 Mar	Ministry of Agr./Lacuna	150 eggs	yes
11 Mar	Presidency/Lacuna - Angel	1 sack feed	no
11 Mar	President's brother/Anatolio	120 eggs	yes
15 Mar	German expert/Anatolio	150 eggs	yes
17 Mar	Presidency/Anatolio	240 eggs	yes

\$\$ Tom decided no more feed to be given away

\$ Borrowed 50 but returned 39 sacks

DATE	SOURCE OF REQUEST/ SIGNED BY	ITEM	PAYMENT
26 Mar	Private party/Lacuna	150 eggs	yes
31 Mar	Morrocan soldiers/Egenga	100 eggs	yes
31 Mar	Lacuna Family/Lacuna	180 eggs	yes
Mar	National ship/Lacuna	300 eggs	yes
3 Apr	Minister of Agr. wife/Miguel	180 eggs	yes
5 Apr	Private party/Miguel	210 eggs	yes
Apr	Minister of Agr./Minister of Agr	150 eggs	yes
5 Apr	China Embassy/Lacuna	150 eggs	yes
6 Apr	Delegate of Agr/Delegate of Agr	60 eggs	yes
7 Apr	Unknown/Miguel	300 eggs	yes
7 Apr	Unknown/Miguel	150 eggs	yes
3 Apr.	Unknown/miguel	150 eggs	yes
12 Apr	Lyonga/Eyenga	120 eggs	yes
19 Apr.	Unknown/Anatolio	180 eggs	yes
22 Apr	A Minister/Lacuna	60 eggs	yes
27 Apr	Ministry chicken farm.Eyenga	15 sacks feed	no
28 Apr	Miramar restaurant/Lacuna	150 eggs	yes
28 Apr	Morrocan soldiers/Lacuna	150 eggs	yes
28 Apr	Palace/Lacuna	120 eggs	yes
28 Apr	Commission from Cameroon/lacuna	120 eggs	yes
30 Apr.	Football club/Presidency	120 eggs	yes
1 May	Private party/Miguel	150 eggs	yes
9 May	Minister's wife/Lacuna	180 eggs	yes
13 May	Ministry of Agr./Lacuna	120 eggs	yes
13 May	Ministry of Agr./Miguel	240 eggs	yes
14 May	Ministry of Agr./Lacuna	180 eggs	yes
19 May	Presidency/Lacuna	6 chickens	no
19 May	Presidency/Lacuna	90 eggs	no
6 June	Department Store/Lacuna	2 sacks feed	no
June	Private party/Lacuna	90 eggs	yes

June 30, 1983

Cam H. Wickham, PRM

Project 653-0001, Agricultural Development
Trip Report, Malabo, Equatorial Guinea, June 21-25, 1983

DISTRIBUTION

THRU: H. Vaitaitis, PRM

I was met at the Malabo airport at 08:45 by IHAP Poultry Advisor Thomas Wetzel. We proceeded immediately to the U.S. Embassy where I had a private briefing lasting approximately 20 minutes with Ambassador Alan Hardy. The Ambassador was mostly interested in matters such as the methodology which I intended to employ in my study of the costs of production of the poultry center at Basile (CEPAB), what the USAID intended to do with the results, what instructions I had brought from Yaounde, and so forth. He approved the scope of work and offered to support USAID efforts to obtain a price increase above the BK 100 currently prevailing should the study indicate that it was warranted.

The afternoon was spent at Basile reviewing the center's financial accounts, discussing the economic life of the physical plant and equipment and in making the preliminary financial calculations. Progress was far more rapid than I had anticipated. This was due to the fact that Tom Wetzel has kept excellent financial records. We were able to estimate many monthly and yearly costs based upon the center's expenditures during the three and one half months that the layer flock has been productive. Then too, as an experienced chicken farmer himself, Tom was able to provide good estimates for the economic life of the present layers, the value of the feed consumed each month, and so forth.

The cost estimates which were derived are presented in the attached table. The costs are presented on a monthly and annual basis. The yearly figures are presented under two assumptions, A and B. The first, or A, calculates the annual costs of the various categories of imported inputs at the official exchange rate of BK 280 = \$1.00. With assumption B, on the other hand, the annual costs of imported equipment are estimated at the exchange rate which the IBRD has suggested as a realistic value for the Bipkwele, or BK 1400 = \$1.00. These costs would reflect more accurately the value in Bipkwele of the inputs which must be imported from abroad. They include the feed, day old chicks, fuel, automobiles, equipment and parts. At the official exchange rate these components, sum to 52 percent of the value of all inputs.

Most of the cost categories are fairly straightforward. Some of them do warrant explanation, however. With labor, for example, the first three categories of expenditure, i.e., full time, part time and overtime, were multiplied by a factor of 13 rather than by 12 to obtain the annual costs. This was necessary because by law all employees receive two weeks of bonus pay on independence day and two additional weeks' pay at Christmas.

Automobile costs are actually the estimated monthly and annual depreciation charges required to purchase two vehicles valuing \$12,000 each every three years, including transportation charges and assuming duty free entry. The repair and replacement of parts for the two vehicles are assumed to cost an average of approximately \$5,100 each per year. The maintenance expenditures include \$10,000 (official rate) annually for the repair of the physical facilities and depreciation charges permitting the replacement of \$26,000 worth of imported equipment every five years.

The final cost appearing in the calculations is a 15 percent annual rate of return. It is included as a cost on economic rather than accounting grounds. The philosophy for considering a normal rate of return as a cost is that if an enterprise does not obtain such a return it will not remain in operation in the long run. The 15 percent figure is simply an estimate of the prevailing rate of return on investments in Equatorial Guinea.

Offsetting the various costs are the revenues from the sale of the eggs and broilers that the center produces. At the moment, plans are to produce 15,000 broilers per year for sale at BK 1,000 each. Revenues from their sale would thus equal BK 150,000 annually. The number of eggs produced per year is much more difficult to derive. First, the layers only start producing after they are five months old. Second, production follows a set pattern. It rises very rapidly to a peak and then begins gradually to decline. Within one year production declines to such an extent that it becomes uneconomic to maintain the flock after that time. While this general pattern is clear, however, it is nonetheless difficult to predict when the decline in production will begin and how precipitous it will be. The Basile flock began to produce in February. Production rapidly rose to 2,200 eggs per day. By mid April, however, production had declined to 2,000 per day. When I was at the center last week daily production was averaging 1,700 to 1,800. According to Tom Wetzel, all indications are that the decline in production will be rapid and that the flock will no longer be economically viable after another three or four months. He attributes this partially to the feed, which is for broilers rather than for layers, partially to the harsh tropical heat and humidity, and partially to the inexperience of the center's workforce. Overall, Wetzel estimates that on an annual basis, the center's flock will have a production rate of about 45 percent, or 492,750 eggs per year. If so, and assuming for purposes of computation that one broiler is equivalent in value to 10 eggs, total annual production would be 492,750 plus (15,000 X 10) = 150,000 eggs or 642,750 all together. If the figure is then divided into the annual cost of production under assumptions A and B, the average price of each egg required to generate an equivalent amount of revenue is obtained. These figures were BK 94 under assumption A and BK 354 with assumption B.

Which price is correct? In a strictly legal sense, the official exchange rate, which appears in assumption A, leads to the appropriate price. However, the fact that outside legal channels the Bipkwele trades at values that are far beneath the official exchange rate indicates that the currency is significantly overvalued. If production at Basile depended either exclusively or heavily upon domestically produced inputs, there would have been little difference between the per unit cost of production under assumptions A and B. As noted earlier, however, this is not the case. Even with the overvalued official exchange rate foreign inputs accounted for 52 percent of all production costs. If these inputs are assigned values obtained from the exchange rate which the IBRD staff estimates to be the free market exchange rate, then the price of BK 354 derived from assumption B more closely approximates the cost of producing eggs at Basile.

After reviewing the above calculations with Tom Wetzel, I presented them to the Board of Directors at a luncheon on Thursday the 23rd. The Board appeared to accept the validity of the findings. However, they asked me to prepare a written report which would include the calculations and the assumptions upon which they were based. A discussion ensued in which the Board's responsibility to the center at Basile and to the public at large were debated. The unsatisfactory performance of the present marketing system was also discussed. The meeting adjourned with one of the members of the Board, the manager of the Banco de Credito y Desarrollo, requesting a meeting with Tom and I at 09:30 the following morning.

The follow up meeting began with a discussion of the previous day's topics. After reviewing my calculations, the Director proposed that the Center raise the price of eggs to BK 150. This action would have the dual purpose of building up the center's cash reserve position in the event of any official devaluation in the future and it would also cut the speculative margin on the 400 or so eggs that were being clandestinely resold each day in the market for BK 250. In the future, it was further decided that a maximum of 4 eggs would be sold to each consumer, exclusively in the center's outlets. After the meeting Tom said that he regarded the conversation as a semi-official feeler by the Government to determine what AID would be willing to accept in the way of solution to the center's pricing and marketing problems. He regarded the Board of Director's subsequent approval as pro forma.

Throughout my stay in Malabo, Ambassador Hardy remained in close touch. We discussed the center's problems in depth. He considers Basile's successful operation as the basis of the USAID program in EG. Should further pricing or distribution problems arise in the future, or should unpaid requisitions by Government officials become too serious, he is willing to bring them up with the Minister of Agriculture and even the President. Further, he is willing to hold the forthcoming CLUSA OPG hostage in the process. It appears to be our best bargaining chip at the moment.

DISTRIBUTION:

Mr. Levin	Ms. Yoshioka
Mr. Wilder	Ms. Vaitaitis
Mr. Dominessy	MR. Wickham
Mr. Scott	C & R
Mr. DeOlazo	Reading File

Drafter:PRM:CHWickham:aca_____7/01/83.

Production Costs
Centro de Experimentacion y Produccion de Basilé

	Average Monthly Expenditure BK	Average yearly Expenditure Assumptions A BK	Average yearly Expenditure Assumption B BK
I			
<u>Trabajo-labor</u>			
Regular - Full Time	290000	3770000	3770000
Supplemental - Part Time	122500	1592500	1592500
Sobresueldos - Overtime	138000	1794000	1794000
Gastos Medicales - Medical	34500	414000	414000
	<u>585000</u>	<u>7570500</u>	<u>7570500</u>
II			
<u>Insumos - Inputs</u>			
Piensos - Feed	2100000	25200000	126000000
Pollitos - DayOldChicks	346000	4152000	20760000
Combustible - Fuel	216000	2592000	12960000
	<u>2662000</u>	<u>31944000</u>	<u>159270000</u>
III			
<u>Administracion</u>			
Junta de Direccion (Board of Directors)	64000	768000	768000
Gastos de la Oficina (Office Expenses)	42000	504000	504000
	<u>106000</u>	<u>1272000</u>	<u>1272000</u>
IV			
<u>Transporte</u>			
Coches - Autos	186667	2240004	11200000
Alquilar de Camiones (Truck rental)	100000	1200000	6000000
Respuestos y Areglos (Repair and Parts)	120000	1440000	5040000
	<u>406667</u>	<u>4880004</u>	<u>22240000</u>

V	<u>Mantenamiento</u> (Maintenance)	353000	4236000	4236000
VI	<u>Gastos Diversos</u> (Miscellaneous)	213000	2556000	2556000
VII	<u>Ganancia (15 por ciento)</u> (Profit 15 percent)	468855	7868780	29639180
VIII	<u>Total de los Gastos</u> (Total Costs)	4974555	60327284	227233680

Ingresos - Revenues

Vente de	492,750	huevos, y 15,000 Pollos de carne
		(A BK 1,000 cada uno) = 492750 + 150000
Sale of	492,750	eggs and 15,000 Broilers (at BK 1,000 each)

El Costo Promedio de Produccion por huevo
Average Cost of Production per egg

$$\frac{60327284}{642750} = 93.9 \quad \frac{227233680}{642750} = 353.5$$

UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

Yaounde

ATTACHMENT N° 3

INTERNATIONAL ADDRESS
USAID
B. P. 817
YAOUNDE, CAMEROUN

UNITED STATES ADDRESS :
YAOUNDE (AID)
DEPARTMENT OF STATE
WASHINGTON, D. C. 20520

August 2, 1983

The Minister
Ministry of Agriculture, Livestock and
Rural Development
Malabo, Equatorial Guinea

Subject: Project Implementation Letter No. 9
Agriculture Development Project
No. 653-0001.

Dear Mr. Minister:

I have the honor to refer to the Project Grant Agreement for the subject project entered into between our two Governments on January 13, 1981 and to its amendment of September 24, 1982. In this implementation letter, I would like to address two issues; first the pricing and marketing of eggs and poultry products from the Poultry Production Center (CEPAB), and second, the strategy we might use in centralizing and rehabilitating vehicles provided to the coffee and cocoa cooperatives.

I am very satisfied with the progress that has been made in rehabilitating the Poultry Production Center at Basile and the success there has been in producing poultry and eggs. The sudden appearance of a large quantity of poultry and eggs to be sold to the general public has resulted in some marketing and pricing problems which were not adequately foreseen in the Project Paper. I understand you have made several efforts in resolving these problems. I also have asked members of my staff to visit the project site to identify the difficulties and make recommendations which would ensure that the project adheres to its mutually agreed upon objectives. I understand that the directors of CEPAB and members of your staff have discussed these issues in depth with my staff members and that steps have already been taken to resolve the problems which have arisen. My specific concerns are that CEPAB generate adequate revenues to ensure its continuous operation after financial and technical support from USAID is completed, and that an adequate marketing system is established whereby a supply of eggs and poultry is available to the general Equatorial Guinean population.

My program economist, Dr. Cam Wickham, has completed a detailed study of the financial operation of CEPAB from which I have drawn some conclusions. Dr. Wickham stated the records being kept at CEPAB were quite good. They made his study much easier than it would otherwise have been. I have included the results of his calculations as Attachment 1 to this letter. As is readily apparent, the average cost of production per egg, which I would consider a fair

BEST AVAILABLE

selling price, varies considerably if one is to consider the cost of imported inputs at the official exchange rate for the Birkwele (approximately BK 250 = 1 \$ U.S.) or if one uses the World Bank's estimated free marketing exchange value for the Birkwele (BK 1400 = 1 \$ U.S.). I know the Government of Equatorial Guinea currently is negotiating with several international and bilateral organizations over budget support and currency convertability. Most of them recommend a substantial realignment in the value of the Birkwele. I also realize the constraints you are under in obtaining the required foreign exchange reserves to purchase the necessary imported inputs for the CEPAB operation. I therefore feel that we should target the price of eggs at the World Bank's recommended value of the Birkwele. This should be accomplished in stages to ensure that the poultry products produced by CEPAB are kept within the financial reach of the ordinary consumer. Moreover, when the value of the Birkwele eventually is realigned, there will not be a sudden shock from the increase in poultry product prices which would discourage their consumption. Accordingly, I recommend that the price of eggs be set at BK 150 and the price of broilers be set at BK 1500, with these prices being reviewed and updated every four months based upon the relative strength of the Birkwele and the monetary conditions present in Equatorial Guinea at that time.

Concerning the marketing of eggs and poultry, my major concern is that poultry products be available to the ordinary consumer at a fair price. Apparently, the market value of eggs in Malabo is currently BK 250 with the result that eggs which are sold at the official price are quickly bought out and resold at the higher market value price. There are several ways this could be controlled. Firstly, you might consider close monitoring of egg sales from established outlets, monitoring egg prices and limiting the number of eggs sold per person to ensure an equitable distribution and to discourage resale. Secondly, you might consider all egg and poultry sales being done directly by CEPAB at established CEPAB outlets in Malabo. CEPAB would operate from 1 to 3 booths for the entire day and offer eggs at the CEPAB established price. Since the demand is greater than the supply, CEPAB would regulate the number of eggs they sell to an individual and the number of booths open to ensure eggs are available for sale the entire day. Sales to restaurants could be done in greater numbers but only in relation to what is logically their demand for daily operation. As egg production increases and supply eventually catches up with demand, CEPAB could leave the retailing business and become a wholesaler to private distributors. Whatever technique is used, the end result should be that it is possible for any individual to find poultry products available at the CEPAB established price.

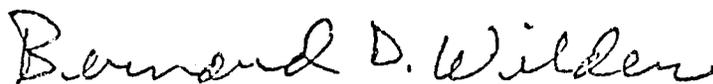
I encourage you to continue devoting attention to the problems of marketing and pricing. I feel that only if these problems are properly addressed can we be certain that the project will reach the objectives of ensuring an adequate supply of poultry and eggs to the people of Bioko.

Concerning the second issue of the centralization and rehabilitation of vehicles provided to the coffee and cocoa cooperatives, I appreciate your letter of April 19, 1983, wherein you agreed in principle to my letter of April 5, 1983. Also the centralization of project vehicles was further mentioned in your letter of June 23, 1983. There is already a variety of spare parts and tires for the vehicles in transit to Malabo. These should

be arriving in Malabo in the near future. I believe the next step is to physically locate all of the vehicles, determine if they are in condition to be either towed or driven to a central area, identify what repairs are needed, advise the cooperatives of what is to be done with the vehicles, and then transfer the vehicles to this central area. To accomplish this, I would like to identify an individual under a short term technical assistance contract to work with someone assigned from your ministry. For this purpose I have prepared the attached Project Implementation Order for Technical Assistance (PIO/T) for your examination and approval. When the vehicles have been regrouped and the spare parts have been received, I will ask my staff to recruit a mechanic to do the necessary repair work on the vehicles.

I look forward to your continued cooperation in the project.

Sincerely,



Bernard D. Wilder
Acting Director

Attachment: PIO/T

CEPAB Production Costs

The following are production cost estimates provided on a monthly and annual basis. The yearly figures are presented under two assumptions, A and B. The first, or A, calculates the annual costs of the various categories of imported inputs at the official exchange rate of BK 280 = \$1.00. With assumption B, on the other hand, the annual costs of imported equipment are estimated at the exchange rate which the World Bank has suggested as a realistic value for the Bipkwele, or BK 1400 = \$1.00. These costs reflect more accurately the value in Bipkwele of the inputs which must be imported from abroad. They include the feed, day old chicks, fuel, automobiles, equipment and parts. At the official exchange rate these components sum to 52 percent of the value of all inputs. At the World Bank's suggested exchange rate, imported goods amount to 77 percent of the total cost of production.

Most of the cost categories are fairly straightforward. Some of them do warrant explanation, however. With labor, for example, the first three categories of expenditure, i.e., full time, part time and overtime, were multiplied by a factor of 13 rather than by 12 to obtain the annual costs. This is necessary because by law all employees receive two weeks of bonus pay on independence day and two additional weeks' pay at Christmas.

Automobile costs are actually the estimated monthly and annual depreciation charges required to purchase two vehicles valuing \$12,000 each every three years, including transportation charges and assuming duty free entry. The repair and replacement of parts for the two vehicles is assumed to cost an average of approximately \$5,100 each per year. The maintenance expenditures include \$10,000 (official rate) annually for the repair of the physical facilities and depreciation charges permitting the replacement of \$26,000 worth of imported equipment every five years.

The final cost appearing in the calculations is a 15 percent annual rate of return. It is included as a cost on economic rather than accounting grounds. The philosophy for considering a normal rate of return as a cost is that if an enterprise does not obtain such a return it will not remain in operation in the long run. The 15 percent figure is simply an estimate of the prevailing rate of return on investments in Equatorial Guinea.

Offsetting the various costs are the revenues from the sale of the eggs and broilers that the center produces. At the moment, plans are to produce 15,000 broilers per year for sale at BK 1,000 each. Revenues from their sale would thus equal BK 15,000,000 annually. The number of eggs produced per year is much more difficult to derive. First, the layers only start producing after they are five months old. Second, production follows a set pattern. It rises very rapidly to a peak and then begins gradually to decline. Within one year production declines to such an extent that it becomes uneconomic to maintain the flock after that time. While this general pattern is clear, however, it is nonetheless difficult to predict when the decline in production will begin and how precipitous it will be. The Basile flock began to produce in February.

Production rapidly rose to 2,200 eggs per day. By mid April, however, production had declined to 2,000 per day. By June production was averaging 1,700 to 1,800. According to Poultry Advisor, Tom Wetsel, all indications are that the decline in production will be rapid and that the existing flock will no longer be economically viable by September or October. He attributes this partially to the feed, which is for broilers rather than for layers, partially to the harsh tropical heat and humidity, and partially to the inexperience of the center's workforce. Overall, Wetsel estimates that on an annual basis, the center's flock will have a production rate of about 45 percent, or 492,750 eggs per year. If so, and assuming for purposes of computation that one broiler is equivalent in value to 10 eggs, total annual production would be 492,750 plus $(15,000 \times 10) = 150,000$ eggs or 642,750 all together. If the figure is then divided into the annual cost of production under assumptions A and B, the average price of each egg required to generate an equivalent amount of revenue is obtained. These figures are BK 94 under assumption A and BK 354 with assumption B.

Production Costs
Centro de Experimentacion y Produccion de Basilé

	Gastos promedio Menovalés	Gastos Promedio anuales	Gastos Promedio anuales
	Average Monthly Expenditure	Hipotesis A Average Yearly Expenditure	Hipotesis B Average Yearly Expenditure
	BK	Assumptions A BK	Assumptions B BK
I <u>Trabajo-labor</u>			
Regular - Full Time	290000	3770000	3770000
Supplemental - Part Time	122500	1592500	1592500
Sobresueldos - Overtime	138000	1794000	1794000
Gastos Medicales - Medical	34500	414000	414000
	<u>585000</u>	<u>7570500</u>	<u>7570500</u>
II <u>Insumos - Inputs</u>			
Piensos - Feed	2100000	25200000	12600000
Pollitos - Day old chicks	346000	4152000	20760000
Combustible - Fuel	216000	2592000	12960000
	<u>2662000</u>	<u>31944000</u>	<u>159270000</u>
III <u>Administracion</u>			
Junta de Direccion (Board of Directors)	64000	768000	768000
Gastos de la Oficina (Office Expenses)	42000	504000	504000
	<u>106000</u>	<u>1272000</u>	<u>1272000</u>
IV <u>Transporte</u>			
Coches - Autos	186667	2240004	11200000
Alquilar de Camiones (Truck rental)	100000	1200000	6000000
Respuestos y Areglos (Repair and Parts)	120000	1440000	5040000
	<u>406667</u>	<u>4880004</u>	<u>22240000</u>
V <u>Mantenamiento</u> (Maintenance)	353000	4236000	4236000

VI	<u>Gastos Diversos</u> (Miscellaneous)	213000	2556000	2556000
VII	<u>Ganancia (15 por ciento)</u> (Profit 15 percent)	468855	7868780	29639180
VIII	<u>Total de los Gastos</u> (Total Costs)	4974555	60327284	227233680

Ingresos - Revenues

Venta de 492,750 huevos, y 15,000 Pollos de carne
(A BK 1,000 cada uno) = 492750 + 150000

Sale of 492,750 eggs and 15,000 Broilers (at BK 1,000 each)

El Costo Promedio de Produccion por huevo $\frac{60327284}{642750}$ = 93.9 $\frac{227233680}{642750}$ = 353.5

Average Cost of Production per egg

DATE: December 13, 1982

memorandum

REPLY TO
ATTN OF: Mr. Larry J. Dominessy, ARD

SUBJECT: Field Trip to Equatorial Guinea; remarks about current project activities and observations about possible future activities.

TO: The Files

I arrived in Malabo about noon on November 29. I met with Ambassador Hardy to briefly outline the program for my visit. Following this, I met with Mr. Anatolio, Secretary General of the Ministry of Agriculture, Livestock and Forestry, to discuss pending project issues and what I expected to accomplish during my visit. I discussed the following pending issues with Mr. Anatolio:

- (1) Repair and renovation work to be done on the Poultry Production Center: I gave Mr. Anatolio the English copy of PIL 8 which authorizes the Ministry of Agriculture to enter into a contract for the repair and renovation of the PPC. I explained that USAID was having some difficulty getting the PIL translated and I was unable to bring the completed signed PIL's as I had promised two weeks previously. As the PIL had been cleared in draft and the work to be done on the PPC was of an emergency nature, I suggested he begin the contracting process according to the implementation letter, and USAID would forward the signed English and Spanish copies as soon as they were complete.
- (2) Participant training under the AMDP: I gave Mr. Anatolio all the forms which needed completion to support the PIO/P's being prepared for 7 participants. I explained USAID could not guarantee that all 7 participants could begin training at the same time, but would try to do this. Mr. Anatolio stated he would see the forms were completed and the other necessary documentation provided.
- (3) Operational plan for the PPC: We established Monday, December 6, 9:00 a.m. for a meeting among the Board of Directors. Mr. Anatolio, Tom Wetsel and myself were to establish the basis for such a plan. I stated I could only provide guidance on what USAID expected, while the actual plan was the responsibility of the Ministry of Agriculture.



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

OPTIONAL FORM NO. 10
(REV. 7-76)
GSA FPMR (41 CFR) 101-11.6
5010-112

(4) Field trip to Bata: We discussed what arrangements had been made and my departure time.

That evening I met again with Mr. Anatolio and we discussed the progress being made on the possible cooperative development project. I let him read my recent cable to Washington describing the activity. He said he took exception to the fact that I did not see the cooperatives as true cooperatives but as communal organizations. I replied that communal probably was stronger than what was meant, and perhaps associations was more accurate. I added that the E.C. cooperatives lack many elements of true cooperatives, particularly the ability to act independently. I explained that the development of the project would be a collaborative effort where such differences of opinion would be freely discussed.

On Tuesday, November 30, I flew to Bata on the Spanish military transport airplane. I was met at the airport by the Delegate of Agriculture, Mr. Eusebio Maje Oyono, and Mr. Carmello, an agronomist of the Ministry of Agriculture from Malabo. They accompanied me to my hotel and we discussed the agenda to be followed during the next three days. In the afternoon Mr. Carmello accompanied me to an experimental farm of the Ministry of Agriculture being managed by a French volunteer under FED funding. Most of the work was being done in food crops. Work on this experimental farm has only recently been restarted and most of the trials are in poor condition.

On Wednesday, December 1, I was met at my hotel by Mr. Carmello for an 8:30 departure on a field trip to the interior of the country. However, the city was out of diesel fuel and we spent until about 2:00 p.m. finding enough to begin our trip. During the morning in Bata I was able to examine 6 of the 13 project funded vehicles. In our travels about the mainland, we were able to see another 5. We visited 8 cooperatives and the following are my observations on what I saw:

1. Project funded vehicles: At least 6 of the 13 vehicles on the mainland are in operation but each has serious problems. I did not see another 2, but they were reported to be operational. A Dodge Fargo pickup given to the Ministry Delegation of Agriculture in Bata was rolled after 9321 kilometers and rests in garage. A GMC stake-bed truck has been parked along the road near the cooperative of Oveng and is being scavenged for parts. A Ford pickup at the cooperative of Nkimi was on blocks because of tire problems, but the driver said it ran. The GMC stake-bed truck from Mbini is at the Aficar Africa garage where it has been deadlined since the visit of the Louis Berger mechanic, and is being used for parts. My estimation is the entire fleet will be unoperational within 6 to 12 months in part for the following reasons:

- Tires on all the trucks are either badly worn, bald, cords showing or blown. Most of the GMC stake-bed trucks are running with only 2 of the 4 rear tires inflated. All replacement tires provided with the vehicles have disappeared.

- Air cleaner housings on all of the GMC stake-bed trucks have shaken loose and most of them have been completely removed. The trucks are now inhaling unfiltered air from the country's dusty roads.
- Most trucks have not had an oil change since the visit of the Louis Berger mechanic. The oil in most vehicles is a dark black. I visited the Aficar Africa garage in Bata and ascertained that only one project vehicle had made a visit to the garage since the departure of the Louis Berger mechanic and that no financial arrangement had been made with the garage to do maintenance. The garage currently has possession of what few spare parts are available.
- One or both front springs on all of the GMC stake-bed trucks have one or more broken spring leaves. The road conditions are very poor, with the worst being paved roads which have broken up. Equatorial Guineans appear to have little appreciation or training in preventive maintenance and drive vehicles until they stop.
- Very little of the vehicle use is for actual cocoa or coffee production. They appear to be in use as a general passenger and transport system for villagers. As I mentioned, I saw 5 operating vehicles in Bata at the same time, each loaded with goods and people, but none with cocoa or coffee. While in the countryside I saw one GMC stake-bed truck traveling to Bata with a load of people and bananas, and another coming from Bata hauling a load of people and a considerable quantity of world food program commodities (rice, powdered milk, cooking oil). Such non-project uses were usually blamed on the Governor.
- It appears the cost and availability of fuel and gasoline are not deterrants to excessive or unproductive use of project vehicles. Although there are random periods of shortages, fuel and gasoline are generally available and at bargain rates. At the official exchange rate, diesel costs \$1.57 per gallon and gasoline \$2.06. At the unofficial (black market rate) the cost is \$.40 per gallon of diesel and \$.53 per gallon of gasoline. Prices in Malabo are about 5% less.
- The following is a summary of vehicle use on Rio Muni as of December 3, 1982:



Vehicle	Coop	Operational	Mileage (miles)	Distance to Bata from Coop (miles)	Theoretical truck loads hauled %
GMC Stake-bed	Mbini	no	16,173	40	147
" " "	Mongo	yes	19,931	25	250
" " "	Ncomo	yes	16,370	90	78
" " "	Ebebiyin	?	?	120	-
" " "	Mongomo	yes	15,287	125	55
" " "	Oveng	no	22,932	125	82
" " "	Ayena	yes	26,436	80	165
" " "	Akonibe	?	?	120	-
" " "	Nsie	no	26,988	105	112
Fargo Pick-up	Akurenan	yes	29,072	130	100
" " "	Bata	no	5,779	0	-
" " "	Mbema	yes	16,214	65	101
Ford Pick-up	Nkimi	no	9,451	45	79

* Based upon round trips and 30 miles allowed each trip for gathering the crop.

Based upon the average for the 7 GMC stake-bed trucks listed above (there are 14 altogether in the project), if each load hauled were a conservative 4 tons, the project should have close to doubled its intended life of project goal. This obviously is not the case. My estimation is that the production of cocoa and coffee has been negligibly influenced by the presence of the project trucks. Other restraints are too important. The cooperative members complain that this year they were not able to produce a good crop because the National Bank was not able to give loans as requested by the Ministry of Agriculture to finance labor and tools. They complain they are not receiving other long promised inputs from the ministry. There is no competition in the market place and the cooperatives have to accept low prices. In short, the whole affair is so poorly organized that approaching the problem in a piece-meal fashion will probably never produce significant results.

2. The Cooperatives: For the most part, the cooperatives formed by the GREG on Rio Muni (the mainland) are enthusiastic and full of good will. Each is based in the ruins of a once very fine Spanish plantation farm. The farms may never be what they were in the colonial period, but there is a great deal of potential given the addition of some critical inputs such as know-how (TA) and funds. Mr. Carmello tried to convince me that the Ministry of Agriculture had the know-how; all they needed were funds. They are a long ways from having either. Several cooperative members

admitted to me they lacked the knowledge they needed in crop production, and would "welcome with open arms" all the help they could get. I feel that they were sincere in this.

3. Coffee dehauling: Dr. Arthur Ballantyne, World Bank agronomist, after reviewing our revised project paper remarked "The inability of the farmer to shell his coffee in no way reduces its market ability although shelling would increase its value. At present on the mainland we estimate there are 6000 tons of shelling capacity (commercial), 90% unused because at present all the coffee harvested (or 95%) is being sold to Gabon and Cameroon where payment is made in CFA and where consumer goods are available. At black market exchange rates, the producer can attain about 3 times the official rate of BK 150 per kg, unshelled. We estimate present production to be at least 2000 tons of clean coffee per year based on 200-300 kg/ha average shelled or clean coffee. We do not think that possession of a coffee huller will increase farm productivity; UNDP has 20 in their recently signed UNDF project."

Dr. Ballantynes estimation that much coffee is sold unofficially in Cameroon or Gabon probably is accurate. I visited the Cameroonian border town of Ebolowa which was packed with consumer commodities, construction materials, and tools mostly unavailable in Equatorial Guinea. Access is easy. Nobody asked to see my passport when we crossed the Equatorial Guinean border. Apparently Ebolowa is in the border zone because I did not see any Cameroonian police.

Most of the previous Spanish plantation farms serving as cooperative headquarters which I visited were overgrown with vegetation and in complete disrepair. All of them at one time had been sophistication centers, with sophisticated coffee and cocoa processing equipment, electrical generation plants, storage facilities, drying plants, workers' housing and fantastic villas. To my surprise, the installation at Monte Bata was still relatively intact. Most of the equipment was unoperational for one reason or another, but the equipment was complete and had not been scavenged. The main diesel engine powering the plant worked except that it lacked a battery. A large capacity coffee huller is powered by this. The coop members present said it is operational. A Caterpillar diesel powered electrical generation center appeared to be complete except for minor needs. I asked the coop members if they had actually done any coffee shelling. They replied that the coop members took their coffee to Bata to be processed on a commercial sheller because the coop did not have a battery to start the diesel engine. I am sure their problems are more serious than this, and I doubt if they have the knowledge to make the coffee shellers and sorters actually work. This one operational machine probably could hull all the coffee the cooperatives are producing. There are many similar machines throughout the mainland which are unoperational that spare parts probably are not a problem. Given this, the commercial facility in Bata, the 20 shellers being purchased by the UNDF, the low level of productivity of the cooperatives, and the current inability of the cooperatives to keep anything mechanical operational, I believe it makes little sense to invest \$120,000 for the purchase and installation of coffee processing machinery as is programmed in the current project. The constraints to production are more basic than the supply of sophisticated

machinery (or trucks). The scarce funds available would be much more wisely used attacking the basic problems of organization, cultivation techniques, and marketing.

On Monday, December 6, I met with Mr. Anatolio and was given the documents for AMDP. I met with the students and answered their questions.

Mr. Anatolio presented the newly assigned General Manager for Basila Poultry Production Center, Rafael Maria Baca Nguema, to Tom Wetsel and myself. He stated he was ready to begin work the next day.

Mr. Anatolio also discussed the following problem with me personally. He had encountered Tom Wetsel in the Malabo market several days previous with a load of vegetables and women in a project car. He had become angry (shouting as Wetsel later explained) and asked what Tom was doing using project cars as a taxi service. Tom said he avoided getting into a shouting match at the market but later saw Mr. Anatolio at his office. They discussed the problem and Tom explained that the women were wives of the workers on the poultry farm, and they were making their usual trip to the market to sell produce grown on the farm. Tom agreed not to use the project cars to transport the women anymore.

I later discussed this with Tom and explained that he needed to appreciate Mr. Anatolio's predicament. The Poultry Center is not yet producing poultry and eggs and it is very easy for the Ministry of Agriculture (and Anatolio himself) to be criticized for wasting project funds and equipment while the people of Malabo have yet to see the long awaited poultry products. To make matters worse, when Tom reported to his farm workers that their wives could no longer use the project vehicles, they were angered and insisted upon seeing Mr. Anatolio. For some reason, Mr. Anatolio conceded to their complaint but said he also wanted to see Tom again. I explained to Tom he had made two classic errors. First, he had developed the entire vegetable production off-shoot of the project without the collaboration or blessing of the Ministry of Agriculture. They look upon vegetable production as Tom Wetsel's project and not associated with the ministry. Secondly, after creating the problem and upsetting his workers, he had transferred the responsibility of solving to Mr. Anatolio. I recommended that he show considerable caution in the next few months with the use of the cars. He feels after this the excitement of the beginning of egg and poultry sales in the market will completely overshadow who is riding in the cars.

The Poultry Center now has approximately 5,200 birds and Tom expects egg production to begin in March or April. They will have some meat birds to sell before this. They currently are adding about 1,800 new chicks to the flock every 2 to 3 weeks from the project incubators set up at the Spanish poultry complex in back of the Ministry of Agriculture. Hatching eggs are being supplied by the Spanish poultry farm at Musola.

On Tuesday, December 7, I visited several cooperatives on the island of Bioko. The cooperatives are better organized and better functioning than those on Rio Muni. The five I visited all had operating drying sheds and they all were drying cocoa when I visited. They explained this year was a poor year for cocoa production. The primary problem being insect damage to the cocoa crop. The second most important problem is losses from rodents. They stated they need insecticides which currently are unavailable.

The project provided vehicles on Bioko are in much better condition than those in Rio Muni. Much can be contributed to the far superior roads on Bioko. However, many of the same problems existed; missing air cleaners, broken front springs, worn-out tires, and truck body damage. I did see two vehicles which were receiving very good care. As in Rio Muni, the vehicles seem to have excessive mileage. The following is the status of the few vehicles I was able to see:

Vehicle	Cooperatives	Operational	Mileage	Distance from Malabo	Theoretical Trips
GMC	Basacato Oeste	yes	22,090	28	257
GMC	Bososo	yes	3,631	21	50
GMC	Bombé	?			
GMC	Baney	no			
GMC	Batete	yes	16,035	40	146
Fargo	Basacato Est	yes	14,100	15	235
Fargo	Belebu Balacha	?			
Fargo	Garaje Gran Canaria	no			
Ford	Sacriba	no	10,310	5	258
Ford	Bao Grande	?			

I visited the Poultry Production Center on the morning of December 8. The Center is beginning to look very good. There are over 5000 birds being raised of which about 3000 will be layers and the rest are meat birds. Ages range from a few days to about 3 months. The Center now has a good feed supply, a steady input of new birds, a board of directors and a newly assigned general manager. Those items which now need to be addressed are developing an operational system for the Center emphasizing accountability and a decision of what is to be done about poultry extension activities scheduled in the project which have not yet begun. The scheduled meeting with the Board never materialized because of absence of Mr. Anatolio. Tom Wetsel will work with the Board during the next month to outline an operational plan. Tom is convinced that small farmer production of poultry and eggs is not a good idea given the small size of the island, the small population and the difficulty of providing feed and other inputs to a multitude of small farmers. He feels the PPC can efficiently provide all the needs of the island in poultry and eggs, and any other system would be far less effective and efficient.

From my observations during this field trip, I have the following remarks to make:

1. Most of the project vehicles are in serious need of parts and maintenance and all are in need of tires. Those vehicles which are still operational will cease to function in a few months if only for lack of tires. It would do little good to provide a mechanic at this time since there are very few spare parts available. SMD is in the process of ordering about \$80,000 in parts and I will arrange for a mechanic to be available when the parts and tires arrive.

2. Our current effort with coffee and cocoa cooperatives has done little to improve production of these crops, nor is it likely there will be a significant effect under the revised project. A condition precedent to disbursement of funds for fungicides and coffee processing equipment requires the GREG to set up Special Accounts for the sale of vehicles, fungicides, and coffee equipment. Although the Ministry of Agriculture is in the process of doing this, it is not yet completed. SMD is asking for quotations on fungicides, but no procurement can take place until the conditions precedent are met, and this likely will be too late to them for the 1983 crop season. Given the lack of organization of the cooperatives and the inefficiencies shown to date, I suggest we delay disbursement of funds for the following items under the current revised project for about 1 year with the hope that the new Cooperative Development project is able to begin. In this way, the technical assistance under the new project will have some influence on the use of project commodities, and also it will significantly increase the amount of inputs available to the new project:

Financial advisor to the Special Accounts	\$23,000
Mechanic advisor	40,000
Coffee processing machinery installation advisor	20,000
Coffee processing machinery	100,000
Copper sulfate	298,000
Lime	53,000
Copper Oxide	50,000
	\$ 584,000

3. I believe Tom Wetsel's feelings about the inutility of small farmer production of eggs and poultry on Bioko have some merit and should be studied.

cc: CONF:RGarner
 PRM:IMiller
 PDE:SScott
 MGMT:MYoshioka
 A/DIR:BWilder
 DIR:RDLevin
 Malabo:Amb Walker

Draft:ARD:LJDominessy:bt

Clearance:ARD:WFLitwiller

PREPARED BY JAY CHUNG
MAIZE BREEDER, NCRE
IRA-IITA-USAID

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Travel Report

I was invited by the USAID Mission in Yaounde to accompany the evaluation team of their Poultry Project on the island of Bioko, Equatorial Guinea for 4 days from 2 August to 6 August, 1983. The evaluation team was composed of Mr. Larry Dominessy, Mr. Cisco Ruybal and Ms. Jeannette North.

Purpose of Visit

The poultry project on Bioko has been facing difficulties in production of maize to use as a component of chicken feed. The purpose of my visit was to observe the environmental conditions on the island and assess the constraints to maize production and to provide possible recommendations for its production.

Observation of Maize Growing Conditions

With the evaluation team and Mr. Anatolio Ndong Mba, Secretary General of the Ministry of Agriculture, Equatorial Guinea, and Mr. Tom Wetsel, the Poultry Project technical advisor, I took a grand tour around the island on the 4th of August.

I saw several small scale maize farms in lowland (elevation less than 1,000 m a.s.l.) as well as high land (above 1,000 m). They were variable in their growing stages - from seedling to post-harvesting. The plants were healthy and had fairly vigorous growth. I did not observe any maize streak virus or incidence of rusts, but moderate infection of Northern Leaf Blight (Helminthosporium turcicum) at Moca (1500 m) was observed.

The soils looked fertile with more or less high organic matter. Many places had a lot of fern growing, indicating high in acidity which is not ideal soil condition for maize production. People on the island complained about low solar radiation which may be the main cause of the poor yield of maize. In fact throughout my 4 days of staying in Malabo, it had been overcast and drizzling without any moment of break.

The major factors of the environment that can limit the maize production in general, are soil conditions, moisture, temperature, daylength, radiation and diseases. Total accumulated light during tropical maize growth is reduced greatly by shorter days, by higher cloud cover during major growing seasons, and by shortening of growing season due to high temperatures. These environmental factors, however, can be overcome to a certain extent, by the plasticity within the maize species and by agronomic practices.

At Musola (600 m a.s.l.), I saw a couple of hectares of deserted land which had been used for maize production until last year. According to Mr. Anatolio Mba, a Spanish chicken and hogs project used to grow maize there successfully. At Moca (1500 m a.s.l.), I witnessed 2 hectares of land prepared for maize, of which about the third was under cultivation (milk stage) and another small area was occupied by maize at germination. Plant growth seemed normal, although heterogeneity of soils was observed. This was possibly due to the fact that it was a newly cleared land.

Conclusion and Suggestions

Maize performs best on well-drained, fertile soils in areas of moderately high temperature and adequate but not excessive rainfall well distributed during the growing season. The crop prefers well-aerated, deep loams containing an abundance of organic matter, nitrogen, phosphorus, and potassium. Temperature, length of growing season, and length of day greatly influence the production of maize. The amount, distribution, and efficiency of rainfall also are important factors. Low or poor distribution of rainfall adversely affects yields.

The growing conditions on the island of Bioko may not be the ideal and the best for maize production but they certainly are not impossible adverse conditions for its commercial production.

I would suggest some preliminary maize performance trials as follows:

1. To conduct variety trials in each of low and highland zones. Six to 10 different varieties can be tested at 2-3 locations in each ecology in 2 different seasons. This is to identify most suitable varieties at the locations and to find out ideal time of planting.
2. Leguminous crops which have ability of nitrogen fixation, like crotalaria, beans, cowpeas, etc. can be planted in off season. Maize and these leguminous crops should be planted in rotation for legumes to supply nitrogen to maize. Other possibility is that one should clear large enough land to plant maize and legumes in the same season and alternate sites in following seasons.
3. If soil acidity is found to be a limiting factor, liming at a rate of 0.5 ton per hectare should maintain maize yield high for 3 years after liming. Sustained maize yields for 6 years or longer were reported with lime rate of 2 and 4 tons per hectare in Nigeria.

13. SUMMARY

13.1 The Equatorial Guinea Agriculture Development Project has two components, assistance to coffee and cocoa cooperatives and development of poultry production on the island of Bioko. These two elements are distinct from one another and necessarily will require separate analysis. However, some underlying assumptions made in project development relate to both and these will be indicated when appropriate.

13.2 The Agriculture Development Project Paper was approved on December 30, 1980, and the Project Agreement was signed on January 13, 1981. The project paper subsequently was amended on September 20, 1982, and the Project Agreement was amended on September 24, 1982, extending the project PACD to December 31, 1985, providing additional funds, and expanding the activities of the original project.

13.3 This project is the first development project undertaken by USAID in Equatorial Guinea. Difficulties associated with the establishment of an AID program in this case were compounded by the lack of a permanent USAID presence in the country, a devastated economy and a lack of information upon which to base judgement. As a result, many of the assumptions made during project design proved incorrect and left project implementation in dire need of more detailed planning than was available in the project paper.

13.4 Assistance to farmer cooperatives was mainly in the form of commodities. Although the project amendment was to substantially increase the amount of commodities available to the cooperatives, these were never purchased since a condition precedent to disbursement of funds requiring the establishment of a special account was never fulfilled. The project officer and the project committee decided not to force the establishment of this account since the GREG had yet to fulfill its requirement to establish a special account for commodities provided under the original project. These original commodities were 23 trucks and pickups accompanied by a variety of spare parts and tires which were to be distributed by the GREG Ministry of Agriculture, Livestock and Rural Development (MINALRD) to cooperatives to remove the perceived agricultural production constraint of adequate transportation facilities. Important assumptions and considerations in this choice were that the chief marketing constraint faced by small farmer producers was transportation, that vehicle maintenance would not present any difficulty since the cooperatives had previously owned and maintained their own vehicles, that MINALRD would be able to maintain and control a spare parts inventory, and that MINALRD would be able to manage sale of the vehicles to cooperatives and manage a special account from the proceeds of these sales. In fact, all these assumptions proved incorrect. The vehicles are scattered over a wide area on both the island portion of Equatorial Guinea, Bioko, and the mainland, Rio Muni. The evaluation team only saw one of the vehicles during the evaluation and this vehicle was parked near MINALRD. However, the USAID project officer, who was a member of the evaluation team, has seen most of the vehicles in his extensive travels in Equatorial Guinea during the previous 6 months. His observations are the following:

1. Most of the vehicles are not operational for reasons of major mechanical failures and lack of tires.

2. Only one vehicle observed was in mint condition and receiving meticulous care. Several were receiving somewhat less than satisfactory maintenance, and most were receiving no serious maintenance.

3. Except for one vehicle, all vehicles had various combinations of missing parts, broken springs, damaged bodies, missing air cleaners, completely worn tires and broken windows.

4. Most vehicles had not received regular oil changes or lubrication and several were found to have crankcases overfilled by about 5 liters of oil (oil dip stick levels are written in English and many of the operators mistakenly took an indentation on the dip stick appearing 5 inches from the marked "Full" line on the stick as the full level indicator).

5. All vehicles had 2 to 4 times the mileage recorded on them than would normally be expected for the amount of agricultural productive activities in which they had been engaged. In all cases the vehicles were being used as a passenger service to the major population centers of Bata and Malabo either on a rental basis or under the control of the vehicle operator. (see Attachment 4).

6. In two cases vehicles were found to be removed from the cooperatives and placed under the control of an area governor.

7. Replacement tires delivered with the vehicles had disappeared and spare parts were scattered about, removed from boxes, and in many cases unidentifiable.

8. Most cooperatives lacked the resources and the ability to maintain the vehicles.

9. No cooperative had been informed of an official sales arrangement with MINALRD and no special account or finance committee to manage the special account had been established.*

The introduction of vehicles to the agricultural cooperatives had no noticeable effect on agricultural production. In fact, production of coffee and cocoa decreased during the project period. It is apparent that the constraints to increased agricultural production are much more diverse and complicated than the introduction of transportation vehicles. Among these appears cooperative organization, cooperative management, availability of inputs, control of pests and diseases, availability of credit, and marketing.

13.5 In relative terms the poultry component of the Agricultural Development Project was quite successful in comparison with the agricultural cooperative component and with other development projects in Equatorial Guinea. Although a major purpose in the project, the involvement of 100 small farmers in the commercial production of eggs and poultry, is not being pursued, more appropriate alternatives have been selected. An important assumption in the project, and a promise extracted from the GREG as a condition precedent to disbursement of USAID funds, was that the GREG would provide a continuous supply of feed for the poultry industry created by the project. As of the writing of this evaluation, the GREG has not defaulted on its promise to provide the Poultry

* This requirement was established in co-signed Project Implementation Letter No. 7, which was issued 19 months following the signing of the original Project Agreement.

Production Center (PPC) at Basile with adequate imported chicken feed although it appears there will be a disruption by early October. Feed provided to date has come from several deliveries of an initial \$100,000 order of feed placed by the GREG to the Canary Islands as partial satisfaction of the Condition Precedent. Project personnel have been very cognizant of the GREG's dire economic and financial conditions and its great difficulty in finding adequate foreign exchange reserves to purchase any imported commodities. Equatorial Guinea has no industrial sector except for some small woodworking businesses and essentially must import its entire need in manufactured commodities. With limited exports of coffee, cocoa, and timber, the result is crisis purchasing of critical needs as supplies run low or are exhausted.

The poultry technical advisor estimates that the current supply of chicken feed will be exhausted by the first week of September, 1983. The PPC has requested MINALRD to make a currency conversion from local currency reserves which the PPC has for the importation of 10 additional months of poultry feed and replacement chicks. Although MINALRD believes they are on the verge of obtaining the authority to make this conversion and they already have proformas from the Canary Islands for the purchase of the feed, they are doubtful if the necessary ocean transport could be arranged before the current supply is exhausted. The PPC has made plans to progressively decrease their bird population with the objective of stretching the time until the entire poultry operation is closed down. It is under these conditions that the PPC and the MINALRD have been reluctant to assist small farmers in the creation of small commercial poultry flocks. To be economical, these flocks would require confinement which would require a constant supply of poultry feed, in this case imported poultry feed.

The project paper professed that there were many locally available materials which could be used for the fabrication of feed including animal bones, plam cake, egg shells, corn, cassava and fish meal. In fact, only cassava could be said to be available in sufficient quantity to be considered for use in feed, and this could be used for only a maximum of 20% of the mixture. The project purchased a commercial sized grain mill and feed mixing machine with anticipation that local feed production would become a reality although there were no particular plans for this in the project paper. At the time of this evaluation neither the grain mill nor the feed mixer had been installed. Also an insufficiently sized generator was purchased to power the equipment and this included only the generator, not the power plant which was assumed to exist but was later found to be defective. Although this equipment was inappropriate for the project as originally designed the evaluation team feels the PPC should pursue trials in corn production which may eventually make this equipment useful.

What the poultry component has done is a commendable job of putting the PPC back into production after a decade of abandonment. At the time of the evaluation the PPC was producing eggs and poultry at a rate approaching that specified in the Project Paper. Egg production was at an acceptable rate and level, the birds were in excellent condition and losses from disease and management were minimal. In fact, success was so profound and the demand so great, that both the PPC and MINALRD planned using all available resources to double the size of the operation. The evaluators asked why this would be chosen over provision of inputs to small farmer producers. Generally the response was there was not much confidence that small farmer operations could use the scarce inputs as efficiently as the PPC and the lack of confidence that even a continuous supply of inputs could be made available to the farmer.

The alternative the PPC has followed in lieu of encouraging small farmer commercial flocks is to increase the island's flock of rustic birds (i.e. chickens which are not confined and freely forage for their own food). The rustic bird being introduced also appears to grow a bit larger than other breeds already existing on the island. The general procedure is for the PPC to receive day-old chicks from fertilized eggs provided by and hatched at poultry facilities financed and managed by Spanish technical assistance to MINALRD. These facilities contain incubators provided by the USAID agriculture development project and the price paid by the PPC for the chicks takes this into consideration. The PPC raises the chicks until approximately 2 months of age, an age at which they can fly and adequately escape danger, and then sells them to any interested parties both in Malabo and in villages scattered about the island. PPC personnel attempt to make distribution equitable by taking them to distribution points in Malabo and in villages. Hens are sold for higher prices than cocks to encourage preservation of the hens for reproduction. The evaluation team made a tour of the island and saw project-provided birds in most villages it visited, however, the density of birds found living in Malabo was far superior to that found in small villages. The project-provided birds seemed both healthy and well adapted. Insufficient base data, distribution records and follow-on records existed to make calculated estimates of actual impact, but the visual impression was that a significant number of project birds were populating the island. Whether this had resulted in a total increase in bird population on the island is impossible to say, but the impression is that it has.

13.6 Another important assumption made in the design of the project was that prices for chickens and eggs would continue to be freely determined in the market. In fact, at the time of the writing of the project paper, there were so few eggs and poultry available in the market that a deduction could not be drawn that pricing and marketing were freely determined. This resulted in a major project crisis which had not yet reached its final resolution at the time of the evaluation. The evaluation team feels that the situation is sufficiently significant and instructional that it has included attachments 1, 2 and 3 to this evaluation report which fully explain what happened and what is being done to resolve the problem. Basically, pricing and marketing of eggs and broilers has not followed a system that either would cover production costs or assure that there is an equal access to PPC products by the general population. A detailed survey was not conducted to determine the nature of recipients of PPC products because it was felt inappropriate since Project Implementation Letter N° 9 (see attachment n° 3) concerning this topic was being delivered to the Minister of MINALRD during the evaluation and he did not have time to react. However, the project officer felt the GREG would make a positive response and the situation should be examined again after one or two months. In general, it appears that a disproportionate quantity of poultry products are made available to government offices or higher government officials (see Attachment 1).

The GREG decided to control egg prices in part to assure that eggs were within the financial reach of the majority of the population. Although the PPC is required to sell eggs at 100 BK (32¢) each, they are rarely available at official outlets and are seen in abundance in the central market at 2 to 3 times

this price. In an attempt to control sales of poultry and eggs directly from the PPC which is outside established sales outlets, the PPC created a special flock of broilers entitled "The Presidential Reserve" to place a limit on birds leaving the PPC for this purpose. Also, to minimize direct requests to the PPC for eggs from government offices and government officials, the MINALRD decided to become one of the official outlets for eggs. It is expected that the GREG will examine these policies in view of the contents of Project Implementation Letter N° 9.

13.7 A final remark should be addressed to the condition precedent in the original project agreement which required the GREG to give official status to the PPC as an "autonomous" organization. This has led to considerable confusion as various project players have given their interpretation of what was originally desired. In fact, the PPC has relied upon the MINALRD for its original donation of poultry feed. It continues to rely upon the Ministry to effect currency conversions and to import inputs. The PPC has learned that pricing and marketing require the sanction of the GREG. Likewise, USAID placed some requirements for equitable marketing and financial soundness, and required that the PPC provide extension services. In effect, the PPC is being pulled in many directions and the time is appropriate to define the PPC in terms of a specific charter, its organization and its mode of operation.

14. EVALUATION METHODOLOGY

This is the mid-project evaluation of the Equatorial Guinea Agricultural Development Project, which is specified in the Project Amendment N° 1, dated August, 1982. The purpose of this evaluation is:

- 1) to assess the progress in achieving the project's objectives within the context of the project environment and constraints;
- 2) to make recommendations on project priorities and a plan of action for the remaining two years and five months of the project.

The evaluation was conducted through:

- 1) Discussions with the Secretary General of the Ministry of Agriculture, Livestock and Rural Development (Mr. Anatolio Ndong Mba), IHAP's Project Technical Advisor (Mr. Thomas Wetsel), the U.S. Ambassador to Equatorial Guinea (Ambassador Alan Hardy), and the General Manager of the Poultry Center.
- 2) Visits to the Poultry Production Center, the Malabo market, the Spanish experimental farm, and a tour of the island to get visual impression of the number of project-provided (rustic) birds populating the island and to make rough assessment of the possibility of growing quality corn on the island.
- 3) Review of the project files.
- 4) Visits to cooperatives which have received a project funded vehicles.

15. EXTERNAL FACTORS

There have been no major changes in the project setting or in host government priorities which have had an impact on the project. Equatorial Guinea still faces the serious foreign exchange reserve problem and currency convertibility problem it had at the time of the design of the project paper. The major difficulty, as has been discussed in the Summary Section, is the invalidity of many of the assumptions made. Although the evaluation team was impressed with the operation of the commercial farm at the PPC and hopes that the GREG will continue to be able to honor its commitment to provide a supply of poultry feed, it does not believe sufficient grounds exist to make this an assumption. In the year preceding this evaluation, USAID/Yaounde identified the shortcomings of the cooperative development project with the Cooperative League of the U.S.A. which will, in part, provide the necessary technical assistance and supervision to ensure proper maintenance and control of trucks and pickups provided under the Agricultural Development Project. This, as well as the evaluation team's recommendations for the improvement of the poultry component of the project, will be discussed in the final section of this report which will address planned and suggested modifications which could improve project performance.

16. INPUTS

There has been very little difficulty with the provision of inputs as outlined in the project paper and its amendment. The major difficulty with inputs has been the lack of essential services which must accompany these inputs to make them effective.

For example, a major input to the poultry component is a grain mill and mixer. This equipment had not yet been installed at the time of the evaluation due to the lack of a large generator to power them. This generator is not budgeted for in the current project and a decision must be made as to whether funds in another category of the project should be rescheduled for this purpose. Moreover, it is pointless to have the grain mill and mixer when there is not an adequate supply of local grains available to produce poultry feed.

The GREG has had great difficulty providing one of their major inputs, namely a constant supply of feed. They may be unable to maintain this supply due to their dire economic condition and their concomitant lack of foreign exchange. It is quite likely that a rupture of this supply will occur and result in the poultry operation to be at least temporarily terminated.

The cooperative component of the project lacks the very important input which has been the determining factor in the successes of the poultry component: technical assistance. The cooperative component delivered trucks and pickups to cooperatives that lacked the capacity to adequately maintain and control the vehicles. The vehicles were delivered with absolutely no instruction in their operation and maintenance. The cooperatives were ignorant of even basic maintenance procedures such as knowing the level of oil in the engine crankcases. As a minimum, the project should have provided a full time maintenance specialist and trainer. The project never created a spare parts ordering and control system. The original spare parts delivered with the vehicles were inadequate.

It is practically impossible for this portion of the project to succeed as designed. At the time of the evaluation USAID/Yaounde was in the process of restructuring it and integrating this project component into its new Co-operative Development Project which will be implemented through an OPG to the Cooperative League of the U.S.A. (CLUSA). All future provision of inputs to cooperatives funded under the Agriculture Development project will be controlled by technical assistance members of the CLUSA team.

17. OUTPUTS

The revised project output for the poultry component in the amended project paper is stated as follows:

Functioning Poultry Production Center at Basile producing eggs and poultry meat, providing training, extension and marketing services to small farmers and capable of meeting its own demand for chicken feed.

The following table gives the progress-to-date against projected output targets:

<u>Outputs</u>	<u>Progress to Date</u>
400,000 eggs sold	269,210 eggs sold
8,000 chickens sold	6,138 chickens sold
15 trained extension agents in place	2 trained
Trained PPC General Manager	on-the-job training in progress but will still need further formal training
96 small farmers trained	-0-
150 small farmers receiving regular visits by extension agents	-0-
PPC facilities repaired	75% complete
Equipment installed at PPC	90% installed
Model small farmer production facility built at Basile	constructed

The poultry component has been quite successful in developing the Poultry Center as a producer of eggs and poultry meat made available to the population via the market and as a training site in poultry production skills for the center's staff.

Four chicken houses have been refurbished by the project funds and the residence of the poultry advisor and the office complex have been repaired.

Repair of the electrical and water systems has been started and the PPC has been whitewashed or painted. Poultry equipment has been installed in three buildings. A contractor is currently scheduled to install the feed mill. The appointment of the General Manager was delayed for a year, but the individual finally appointed is qualified and actively manages the center. Farm workers have been involved in weekly training sessions. Short courses have been given in chain saw use, poultry rearing, layer management, vegetable gardening, and feed handling and storage. Two technicians have taken a three week training course in poultry management in Puerto Rico. Moreover, a model small farmer poultry production unit was constructed utilizing local materials.

The project has not yet developed the PPC as a center for poultry extension services for small farmers, the activity that most directly would affect the project goal of improving the small farmers' incomes. Development of this activity has been hampered significantly by the inability to identify a source of poultry feed for the small farmers, the heavy demands on the Technical Advisor's time in establishing and operating the poultry farm due to the logistical difficulties and the delayed appointment of the Center's General Manager.

The Center's main poultry extension activity so far has been the distribution of rustic chickens that are sold to villagers around the island. Since poultry feed is not readily available to the small farmers, the Center has focused its attention on repopulating the island's rustic birds that were considerably depleted during Macias' rule. These birds are better adapted as scavengers than the highly productive imported birds and can survive without the need for poultry feed. The Center is distributing an improved breed of rustic birds (a bit larger than most existing ones), which are hatched in project-funded incubators from fertilized eggs obtained from a Spanish development assistance project. Based on the evaluation team's observation during the tour of the island, these project-provided birds seem to be reaching the far corners of the island and seem to be in healthy condition. The Center has also made extension visits to specific small poultry producers, and has provided medicine and debeaking services.

The Center has been involved, as an unplanned activity, in providing extension services in vegetable gardening. Vegetable gardens first were developed because of the need for food for the Project Technical Advisor and his family. Because a ready market existed in Malabo, the Technical Advisor helped the Center's workers to establish their own commercial gardens adjacent to the PPC. This was done as a means to augment their salaries and improve their interest in the PPC. The Technical Advisor has provided both seeds and advice. A vegetable garden for the Center was also developed, the proceeds of which were used to pay for the Center's fuel and operational needs until poultry production began. Subsequently, the Center was involved in providing seeds and extension services to 120 young women for their gardens at the neighboring girls school in Basile. Also, the Center's workers, themselves, have assisted their relatives in starting vegetable gardens.

For the cooperative assistance component of the project, no more than 5 of the original 23 vehicles provided are operational and providing services to the cooperatives.

18. PURPOSE

The project purpose is to increase small farmer productivity by:

- removing marketing and production constraints faced by coffee and cocoa producers through provision of coffee processing machinery, vehicles, fungicides, and hand tools, vehicle spare parts, and technical assistance to the cooperatives that serve them, and;

- increase on-farm production of poultry meat and eggs through the development of the Basile Poultry Production Center.

18.1 The first End of Project Status (EOPS) condition stated that the amount of cocoa and horticulture produce marketed by the small farmer cooperative members would increase 300% by the end of the 1984/85 crop year and the amount of coffee marketed would increase by 100% during this period. Although records are insufficient to verify the judgement, discussions held with a wide variety of cooperatives and an examination of a World Bank economic summary of Equatorial Guinea show that to date, there has been a decrease in production during this period. The decrease is attributable to many production factors including unavailability of inputs, lack of labor, lack of credit, pests, low soil fertility, poor management, fuel shortages, and poor markets. The production increases expected could never be achieved without a concentrated effort in both capital and technical assistance which is well beyond the scope of this project. In fact, at the time of the writing of this report, most project vehicles were not operational. The CLUSA Cooperative Development Project, if approved, will assist in taking the first step toward making these vehicles operational by repairing at least 6 of them and incorporating them into centralized service centers on both the mainland and the island. The evaluation team recommends the EOPS be changed to coincide with the CLUSA EOPS: "establishment of a transportation system that can be operated by the cooperatives".

18.2 The second EOPS condition requires that by the end of 1985 approximately 150 small farmers will be making a net profit of 15% on their investment in poultry production. As has been discussed in this evaluation report, the poultry production center has made no effort to involve small farmers of commercial poultry production ventures, due to the lack of a feed supply system. Hence, this EOP has not been achieved. As discussed in the summary and recommendations sections, it is not feasible to pursue this objective due to the likelihood that feed will not be forthcoming. Rather, it is recommended that the current program of increasing the number of rustic birds on the island should be continued. As a consequence, the second EOPS should be changed to reflect this new emphasis.

19. GOAL/SUBGOAL

The project goal is to increase the income of small farmers. To date, the evaluation team could find no evidence that this has actually occurred. The larger population of rustic birds would indicate some general increase in the welfare of the general population, although these recipients so far have been mostly other than small farmers.

Attachment N° 4 is a report on a project field trip completed by the project officer during December, 1982. It contains

many remarks pertinent to the actual use the cooperatives have made of the vehicles assigned to them. In summary, all vehicles, except those that were put out of commission shortly after arrival in Equatorial Guinea, have considerable mileage and have been used primarily for general personnel and commodity transport. Although limited use of vehicles has been made for the agricultural productive activities described in the Project Paper, one can say that the recipients have derived benefits from the vehicles which have improved their general welfare only in the short, but certainly not in the long run. Reasons for this limited attainment of the project goal have been discussed in other parts of this evaluation.

20. BENEFICIARIES

20.1 As defined in the Project Paper, the project would benefit "approximately 2,500 small farmers cooperative members and their families by removing the chief constraint, transportation, to increasing their production. The project (would) also benefit approximately 150 small farmer families who receive visits from the Poultry Production Center extension agents or participate in the Center's training program." The number of cooperative members who have actually received benefit is difficult to estimate since during the evaluation period and 6 months prior to it, most of the vehicles were non-operational. The project officer's observations during the previous year are that many people have benefited from the vehicles, but only a small percentage of this has been focused on the increase of production of coffee and cocoa. The vehicles have served as a general transportation service, often being rented for the purpose of transporting people to and from the major cities of Bata and Malabo. Associated with this has been the transport of various commodities to and from central market areas to include bananas, root crops and other marketable items. At least two trucks have been under the direct control of a regional governor and were used for their official as well as unofficial use.

20.2 In the poultry component, 150 small farmer families did not benefit from the project as was the original intention of the Project Paper. The poultry component has evolved around the commercial production of eggs at one large center rather than production at many lesser small farmer centers. The project has produced a goodly supply of poultry and eggs which have been available almost exclusively to the residents of the capital city of Malabo. An adequate distribution system has yet to be devised and it appears that various government offices as well as individuals some how connected with the Poultry Center have easier access to poultry products at the established government prices. Eggs are freely available in the market, but at 2 to 3 times the official price.

20.3 A large number of 2 month old rustic birds have been distributed on the island either directly by the project or through Spanish technical assistance efforts using USAID project funded incubators. These rustic birds are quite apparent on the back streets of Malabo and to a much lesser extent in small villages scattered about the island. Poultry Center personnel have made many visits to villages, taking and filling orders, and providing advice. Although this type of activity was not foreseen in the project, given the conditions that exist, it seems to be a logical choice and is reaching a large and general population.

20.4 People in the village of Basile near the Poultry Center and students at the girls' school adjacent to the Poultry Center have benefited from the extension work in vegetable production offered by the poultry advisor at his own initiative.

20.5 The result of egg and poultry production has been an increase in the nutritional level, particularly in the city of Malabo where most of the products have been sold and animal proteins are generally scarce. The long-term effects are not predictable since the current difficulty with poultry feed shortages threatens to terminate poultry, egg, and chick production at the PPC, soon negating any progress made.

21. UNPLANNED EFFECTS

21.1 A very important unplanned effect is that the GREG has had to examine its role in establishing price controls on food items. USAID's intervention to require the GREG to consider production cost will certainly have an effect on such future considerations as the Equatorial Guinea economy evolves.

21.2 A second unplanned effect is that it has become very evident that the co-operatives have very limited capabilities. Many assumptions made by the GREG and USAID on the outset of the project have proved grossly incorrect and both parties have had to examine the real requirements for their improvement.

21.3 Another unplanned effect has been a very profitable program of vegetable production adjacent to the PPC. This was first begun as a food supply and was later commercialized as a ready market was found in Malabo. Vegetable gardening has begun to increase in Malabo as friends and relatives of the PPC's workers, who were the original beneficiaries of the program, have learned of the technology. The evaluation team has recommended this successful extension activity be expanded.

22. LESSONS LEARNED

The evaluation team concluded that the following are lessons learned from the project experience:

22.1 In a country with complex and very serious economic conditions, it is unlikely that severe constraints to production can be easily relieved simply by the provision of commodities.

22.2 A careful study of constraints to production should be completed prior to the selection of what constraint to address in a project.

22.3 Technical assistance should be a rule and not an exception in development projects. Rarely can commodities simply be distributed without technical assistance to assure that they are used correctly.

22.4 Marketing and pricing issues should not be left to chance or ignored by making an assumption.

22.5 Reporting from the field should be objective and complete to avoid improper conclusions from those with limited knowledge.

22.6 When operating in a country in a dire economic condition and with a very weak administrative infrastructure, the project paper should very carefully examine all areas of probable difficulty and provide a very detailed game plan as to how the project will approach these areas.

23. RECOMMENDATIONS FOR FUTURE PROJECT ACTIVITIES

23.1 Cooperative Component of the Project

23.1a The evaluation team recommends that the commodity list under the amended project paper be changed to include only those items which the CLUSA Cooperative Development Project could reasonably manage and control. World Bank coffee specialist, Dr. Arthur O. Ballantyne, who completed a study on Equatorial Guinea in December, 1982, reviewed the Agriculture Development Project Paper Amendment and took issue with the statement that "coffee producers are unable to market a large part of their crop because machinery needed to hull and clean coffee beans is not readily available". Dr. Ballantyne stated that "the inability of the farmer to shell his coffee in no way reduces its marketability although shelling would increase its value". He also stated that on the mainland the World Bank team estimated that "there are 6000 tons of commercial (coffee) shelling capacity, 90% unused because at present all the coffee harvested, i.e. 95%, is being sold to Gabon and Cameroon where payment is made in CFA and where consumer goods are available". The evaluation team recommends against the purchase of coffee hulling machinery unless it is advised by the CLUSA technical assistance team. Also, the team suggests the commodity list be modified to include those commodities and technical assistance which would dovetail with the Cooperative Development Project.

23.1b The evaluation team recommends that USAID continue its plan to dovetail its activities with the scheduled CLUSA Cooperative Development Project. Specifically, the team recommends the following:

(i) The project budget be revised to provide two mechanics who will also serve as maintenance and driver trainers for a period of one year each. They will assist in the operation of the service centers to be established under the Cooperative Development Project.

(ii) Funds be allocated and purchases proceed for a complete supply of maintenance tools and equipment for the two service centers.

(iii) Commodity inputs such as fungicides, coffee processing equipment, and hand tools be examined to what quantities can actually be controlled and monitored by the Cooperative Development Project and the items to be purchased be modified accordingly.

(iv) Additional funds be allocated for vehicle spare parts.

23.2 Poultry Production Component

23.2a The project evaluation team recommends that for the remainder of the project the poultry component focus its attention on developing the Center's extension services, while maintaining the Center's egg/poultry production activity. The team also suggests that the extension services should not address poultry production only, but build upon its successes in vegetable production and expand its efforts to other potential small farmer activities. In addition, it is suggested that the Center conduct corn trials at various locations on the island, using improved varieties provided by the Agricultural Research Institute in Cameroon and experimenting with different growing seasons. Such trials would serve both as demonstrations and also would be used as a basis for determining whether corn production is feasible on Bioko for the PPC and on a smaller scale for the individual farmer maintaining a small commercial flock.

23.2b This plan of action for the remainder of the project is recommended for several reasons:

- 1) The project technical advisor is now better able to focus his attention on developing the Center's extension services since:
 - the Poultry farm is established and operating;
 - the Center's General Manager is capable of managing the poultry farm, with some advisory assistance from the Technical Advisor.
- 2) The emphasis on developing the extension services and widening the scope of these services will, more directly, address the project's unmet goal of improving the incomes of the small farmers.
- 3) There is a need to develop more activities besides poultry production at the Center, since the future of the poultry farm as a commercial operation is uncertain because of poultry feed supply problems.
- 4) The extension services will have a longer-term effect on improving dietary levels of the population and incomes of the small farmers, while the Center's current egg/poultry production activity meets an immediate need.
- 5) Resolution of the poultry feed problem must be accomplished in the next two years if the GREG is to continue with commercial poultry production as begun in the Project.

In summary, the recommended activities in the poultry component for the remainder of the project include:

- 1) Continuation of the PPC's egg and poultry production - as long as feed is available;

- 2) Development of the Center's extension services to small farmers in:
 - a) Poultry production;
 - b) Corn promotion for local production of poultry feed;
 - c) Other food crops and livestock production.

23.2c PPC Egg and Poultry Production

Recommended future activities for the PPC's egg and poultry production facilities vary depending on the future prospects of obtaining poultry feed. If feed can be supplied on a continual basis, the Center's aim is to increase the production of eggs and chickens which are to be sold according to a pricing and marketing scheme developed by the MINALRD, and approved by the Center's Board of Directors and USAID. At the time of the evaluation, however, the poultry farm had nearly depleted its supply of poultry feed (with 29 days of feed remaining) and an order for a new shipment of feed and chicks was still awaiting GREG approval of a foreign exchange conversion. This left the possibility that when this order of feed and chicks does arrive, it could be well after the present feed is depleted and all the Center's chickens are sold.

To stretch the existing feed in order to maintain as many birds at the farm as possible, the Project Technical Advisor has recommended that a phase-out plan should be adopted immediately. This would entail the selling of a specified number of birds per week, starting with the broilers, followed by the less productive layers, the rest of the layers, and leaving the breeding stock for last. In this way, the feed could be stretched to last until November. This would also avoid the necessity of attempting to sell the whole flock of 3,000 chickens at one time which the country's market could not absorb.

If the new shipment of feed and chicks arrived on schedule, there would be sufficient inputs to double production at the Center and last for a period of 10 months. If this were to happen, building n° 1 at the Center would have to be refurbished and house an additional 1100 birds.

Should the more probable event occur that this new shipment arrive sometime after August, this new supply could be used either to build up the Center's flock from whatever birds remain or to repopulate the farm. Egg production would be considerably delayed, as hens do not begin egg production until they are at least five months old.

Since the current order of feed could last only 10 months, the Center soon would be faced again with obtaining more feed. This may or may not be a problem depending on the Government foreign exchange situation. Should feed not be forthcoming and the Center's flock have to be sold again, the evaluation team suggests that the Center's poultry production activity not start again until a source of continuous and adequate supply of feed can be identified. One possible source is the poultry farm/poultry feed production project to be established in Bata by the African Development Bank. The Project has recently been approved and an advance party is scheduled to arrive in Equatorial Guinea within 30 days. Should the project be successful, poultry feed will be available to the Center within two years.

23.2d Extension Services

Poultry Extension Services

These services can still be provided even if the Center's poultry production actually ceases operation due to lack of poultry feed. The evaluation team recommends that these poultry extension services include:

- a) Continuation of the hatching and distribution of rustic birds to small farmers in Bioko. These rustic birds are an improved breed currently being hatched in project funded incubators from fertilized eggs obtained from a Spanish development assistance project. This breed is a bit larger than most existing rustic birds. They also are better adapted as scavengers than highly productive imported birds and can survive without need for poultry feed.

Since the MINALRD and the Spanish farm also distribute some of these rustic birds, it is necessary that this distribution effort be coordinated. Therefore, the distribution process can be properly recorded for monitoring and evaluation purposes.

- b) Continuation and expansion of the extension visits made to small poultry producers, including the provision of medicine and de-beaking services.
- c) An annual vaccination program of all chickens on the island of Bioko.
- d) Poultry disease identification.
- e) Monitoring the distribution, care, growth, and number of chickens being raised on the island.

23.2e Extension Services in Corn Production

Since imported poultry feed is not available to the small farmers, the evaluation team recommends that the Center explore the possibility of small farmers producing their own local feed.

The first step would be to determine whether adequate small-scale production of corn is feasible on the island. As discussed earlier in the evaluation report, it is suggested that corn trials over a period of one year be implemented on various parts of the island. Based on the three crops produced in that year, an assessment can be made of the feasibility of producing corn, what variety are best, and what areas of the island are the most suitable. Fungicides would be used, but fertilizer would be used only on a limited basis because of importation difficulties and its unavailability to farmers. The evaluation team saw small plots of corn at various places on the island and generally the corn appeared in good condition (see attachment 5 for observations by maize breeder Dr Jay Chung). Dr Chung felt that the rich volcanic soil of the island in combination with proper rotations of leguminous crops would make corn production

possible. The excessive wet climate would limit this production to a time of the year when both sunlight and rainfall were sufficient.

Should small-scale corn production be deemed appropriate, the second step would be for the Center to provide extension services in corn production and its conversion to poultry feed, including training programs, provision of seed, and monitoring corn growth and feed processing. The Center would not be involved in any marketing or pricing schemes for corn.

23.2f Extension Services in Small Livestock and Food Crops

The Center's extension activities beyond poultry and corn production would concentrate on improving the productivity of the small farmer's existing livestock and food crop activities. Extension services could be offered in vegetables, root crops, pigs, goats and rabbits.

23.2g Before extension services can be offered, a thorough assessment must be made of the livestock and food crop production activities on Bioko island and a determination made of what activities could be improved through extension services. This assessment would entail:

- 1) Identification of the agricultural activities currently being undertaken on the island, what activities are doing well, and what activities are doing poorly. This identification should be conducted by the Project Technical Advisor along with the island's agricultural extension agents and the MINALRD.
- 2) Research on those agricultural activities not performing well and identification of methods for improving their productivity that could be promoted through extension services. This research would be conducted using available literature as well as visits such as to the International Institute of Tropical Agriculture in Ibadan, Nigeria, or the Institute of Agricultural Research in Cameroon by the Project Technical Advisor and a member of the MINALRD.

23.2h Once the assessment is completed, and the problem areas and possible extension activities identified, the agricultural extension agents would need to be trained in the various areas identified for extension work. Training would be done at the Center through demonstration crops and livestock raising, conducted by the Project Technical Advisor. Several of these extension agents also would receive 2-3 weeks training at the International Institute of Tropical Agriculture in Ibadan. They, in turn, would provide training courses to small farmers in the villages and provide them with various services such as provision of new varieties of seeds and medicines, and vaccinations for livestock.

A scheme for measuring the impact of this extension service should be developed to assess what improvements have been made. Such measurements would include a count on the distribution and survival rate, the increase in livestock population, and so on. The Center would not be involved in any marketing or pricing activities for these food crops and livestock.

23.2i Personnel

To implement the recommended plan of action for the remainder of the project, the following personnel would be required:

Project Technical Advisor - Expatriate

The PTA would concentrate his attention on the development of the Center's extension services in corn production and in other food crops and livestock. He would be responsible for assessing the small farmer livestock/food crop situation on the island, instructing and working with agricultural extension workers, MINALRD and organizing corn trials. With a member of MINALRD, he would visit Cameroon and Ibadan for instruction in conducting corn trials and for other technical information in crop production. The PTA would also serve in an advisory role on the Center's poultry production and poultry extension activities.

Short-Term Consultants

The PTA would be assisted by short-term consultants from Cameroon and Nigeria, who would make periodic visits to the Center. These consultants would be specialists in corn production and other specific livestock and foodcrop production.

23.2j Extension Agents

The actual extension work would be done by the existing extension agents of MINALRD. One poultry extension agent is based at the Center. In order to assure their mobility about the island needed to perform their extension work, the project may need to provide motorcycles for these agents. Provision for the maintenance, spare parts, and fuel for these motorcycles must also be considered.

23.2k General Manager of the Center

The General Manager would manage the operation of the poultry production center and supervise the poultry extension activities conducted by the Center's extension agent, all with advisory assistance from the PTA.

FINANCES

The recommended plan of action for the remainder of the project would be financed by funds remaining in the cooperative agreement and by part of the funds available in the project's Amendment N° 1 budget. An assessment would have to be made on what funds remain in the cooperative agreement and what portion of these remaining funds are already obligated. This might vary depending on whether the poultry farm will continue operation. The evaluation team has determined that there is \$172,000 available in the Project Paper Amendment budget that could be used for the poultry component's ongoing activities and recommended new extension activities up to December 1985. Of this \$80,000 is allocated for a year's extension for the Poultry Specialist. The remaining \$92,000 was determined based on items in the Amendment budget that was felt could be re-allocated. These items are:

Poultry Feed	\$50,000
Feed mill installation, other facility repair work	\$17,000
Two participants in livestock pro- duction	<u>\$25,000</u>
Total	<u>\$92,000</u>

The installation of the feed mill should still be considered which will require the purchase of a generator. Since the PPC has decided that it is more effective to import chicks for layers and most broilers, it is no longer necessary to maintain a reserve feed supply for breeders. Should the new supply of feed and chicks arrive before the end of August, funds will be needed to refurbish building n° 1 to house the additional chickens. However, it is highly unlikely this will occur, and these funds therefore could be used for extension services instead. Training will occur as an integral part of the activities to be undertaken in extension activities.

23.21 Immediate Actions to be Taken should the Recommended Plan of Action for the Remainder of the Project be Approved

Should the evaluation team's recommended plan of action be approved, IHAP would develop an initial proposal for the implementation of the remainder of the project, based on the team's recommended project activities and on the funds available for this poultry component.

If USAID/Yaounde approves IHAP's initial proposal, IHAP would then send an agricultural specialist to Equatorial Guinea to work with IHAP's Project Technical Advisor (Thomas Wetsel) and the MINALRD in developing a detailed project design and budget for the remainder of the project. This specialist would confer with USAID/Yaounde on the tentative design and budget developed. IHAP would send an official project design and budget for USAID/Yaounde's consideration and approval.