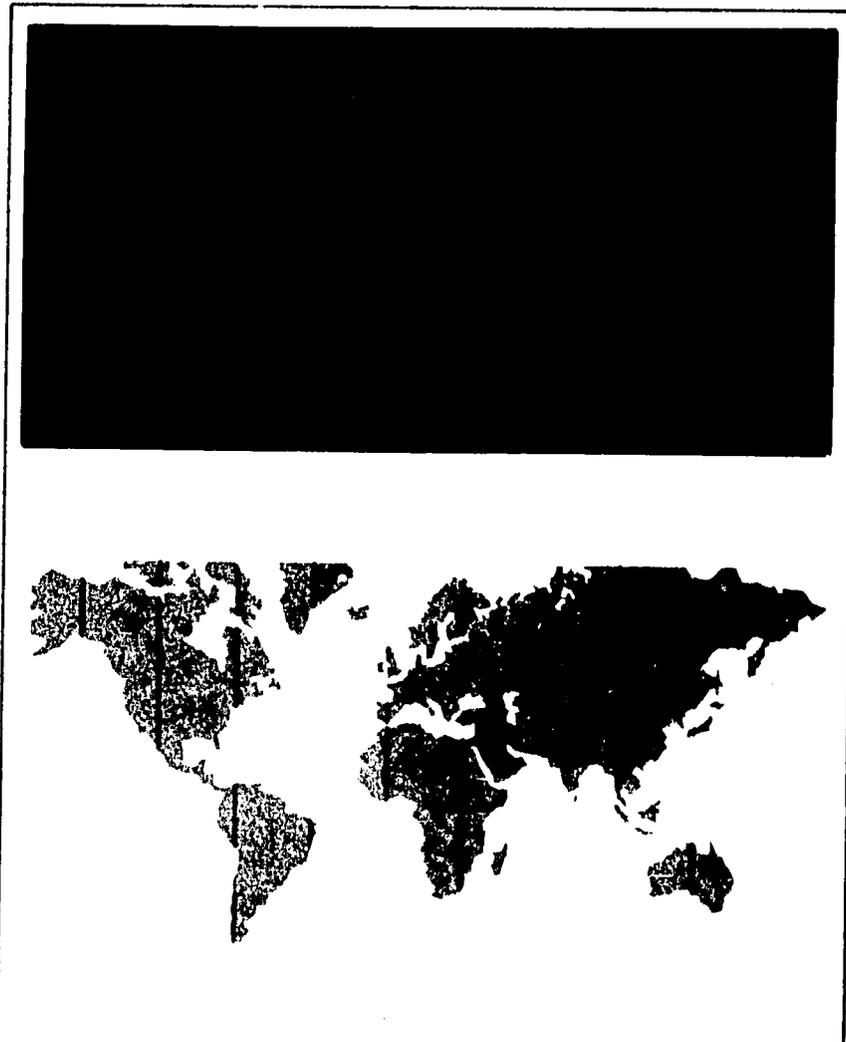


THE
INSPECTOR
GENERAL



Regional Inspector General for Audit
NAIROBI

**INCREASED GOVERNMENT OF SEYCHELLES
SUPPORT FOR AGRICULTURAL DEVELOPMENT
IS NEEDED TO MAXIMIZE ACHIEVEMENTS
FROM THE FOOD CROPS RESEARCH PROJECT**

**AUDIT REPORT NO. 3-662-83-20
JULY 26, 1983**

Applied and adaptive research on over 450 varieties of fruits and vegetables and soil management and fertilizer practices has been on-going. However, in order for results of this research to impact on small farmer productivity, the GOS needed to reaffirm its commitment to agricultural development, and to fully support its extension service.

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EXECUTIVE SUMMARY

Introduction

The goal to which the Food Crops Research project (662-0002) contributes was the increasing of food production and income for small farmers. The specific project purpose was to expand and strengthen the GOS Department of Agriculture and Land Use's capability to (a) conduct research, (b) extend results to small farmers, and (c) protect Seychelles' agriculture from the introduction of exotic pests and diseases from abroad. It intended to accomplish this by introducing improved plant varieties, establishing the capability to determine various food crop nutrient requirements for different soils, re-enforcing extension services, and setting up a pest management/plant protection system.

The Project Agreement (Grant) was signed on August 28, 1979. The initial Project Assistance Completion Date was December 31, 1982. It has now been extended to June 30, 1984. Planned AID and the Government of the Republic of the Seychelles' (GOS) financing over the life of the project were \$1.52 million and the equivalent of \$560,000, respectively. AID expenditures as of November 30, 1982 (latest information on billings) were \$704,952, while the GOS had budgeted the planned funds plus an additional estimated \$450,000. AID contracted for technical assistance with South-East Consortium for International Development (SECID) on a cost reimbursement basis on July 31, 1981.

Purpose and Scope

The prime purpose of this initial review* was to (a) determine whether project objectives were being accomplished, (b) evaluate the effectiveness of implementation and management of the project, and (c) identify and report on significant problem areas. We reviewed project records, held discussions with Embassy/Victoria and project personnel, and visited the project site at Grand Anse Research Center on Mahe Island.

Findings, Conclusions, and Recommendations

As noted in this report, the GOS had limited ability to (a) provide effective counterparts to work with AID-provided scientists and (b) adequately staff and support the extension service. Because REDSO/ESA stated that the Project Paper reflected these manpower

* Our review covered progress from inception through March 24, 1983.

constraints at the time of project design and approval, we can only conclude that there were other considerations than just agricultural development in approving this project.

The project was established primarily to help develop the national research capabilities of the Seychelles and to conduct research on specific problems limiting the yields of food crops in collaboration with Seychellois scientists. Over 400 varieties of fruit and 66 varieties of vegetables had been tested or were undergoing testing, and several improved practices for soil management and fertilization had been identified. However, in order for results of this research to have an impact on raising productivity of the small farmer, the GOS needed to reaffirm its commitment to agricultural development (pages 3 to 7) and to fully support its extension service's efforts to disseminate the research results (pages 11 to 13). Additional areas could have been improved, as capsulated below:

- Counterparts to AID-provided scientists were either unavailable or unplanned and key personnel did not attend planned training (pages 7 to 9).
- Equipment worth \$40,000 remained unutilized; water supplies were inadequate; and thefts from research plots invalidated some variety trial results (pages 9 to 11).

This report contains three recommendations to correct the deficiencies noted in the above areas.

At the conclusion of our audit, our findings were discussed with the U.S. Ambassador to the Seychelles and REDSO/ESA officials. A draft report was provided to both. Their comments during our exit conference and in response to our draft report were duly considered, and where pertinent, are included in this report.

BACKGROUND

Introduction

The Seychelles archipelago, situated 4 to 10 degrees south of the equator, covers an area of 400,000 square miles in the Indian Ocean. Its 42 granitic and 50 coralline islands have a land area of 171 square miles and are inhabited by an integrated population of about 64,000 people, of which about 88 percent reside on the principal island of Mahe, on which the capital city of Victoria is located. The terrain of the granitic islands is eroded, strewn with boulders, and mountainous. The largest island, Mahe, rises to an altitude of more than 900 meters above sea-level.

For the Seychelles, the most important crops traditionally and historically have been coconut and cinnamon. Both crops grow abundantly and are not labor-intensive. Over 90 percent of the large holdings area is under coconut and cinnamon production. While the volume of copra exports has remained constant over the last few years at about 3000 tons, its value has increased from Seychelles Rupees (Rs) 1400 per ton in 1973 to Rs 5300 in 1980 (approximately US. \$250 and \$725, respectively). Cinnamon exports on the other hand have declined by about 50 percent in the same period because of the decline in real prices.

The primary sources of food are both local production and importation of vegetables and fruit. The market potential for local agricultural produce is good because the Government of the Republic of the Seychelles' (GOS) policy aims to substitute as much locally grown produce as possible for foodstuffs now imported. As stated in the National Development Plan (1982-1986), objectives of the GOS agricultural policy include: (a) make the most efficient use of Seychelles' existing and potential farm land; (b) increase local production of food and other agricultural products, especially those which can be import-substituted; and (c) develop the outer islands to their full capacity as a means of increasing the nation's agricultural output, both for local consumption and for export. The economic importance of import substitution is obvious. In 1979 food imports represented 15 percent of total imports to the Seychelles at a cost of about \$13.4 million.

The structure of agriculture in the Seychelles is very limited and fragmented. Including the outlying islands, there are between 70-80 large agricultural holdings, with an average of 300-350 acres each; and about 650 small farmers, each usually with less than five acres of land, holding approximately 1,100 acres of which only about 300 acres are under cultivation. Superimposed on this structure are approximately 4,500 part-time or backyard farmers who are essentially individual householders keeping one or two pigs, and doing some gardening both for their own consumption and to supplement their income.

The goal to which the Food Crops Research project (662-0002) contributes was the increasing of food production and income for small farmers. The project proposed to expand and strengthen the GOS Department of Agriculture and Land Use's capability to (a) conduct applied and adaptive research, (b) extend select, proven results to small farmers, and (c) protect Seychelles' agriculture from the introduction of exotic pests and diseases from abroad. It intended to accomplish this by introducing improved plant varieties, establishing the capability to determine various food crop nutrient requirements for different soils, re-enforcing extension services, and setting up a pest management/plant protection system.

The Project Agreement (Grant) was signed on August 28, 1979. The initial Project Assistance Completion Date was December 31, 1982. It has now been extended to June 30, 1984. Planned AID financing over the life of the project was \$1.52 million. Expenditures as of November 30, 1982 (latest information on billings) were \$704,952. The GOS through its Department of Agriculture and Land Use was to contribute the equivalent of \$560,000 for project activities. In support of agricultural research and development, the GOS had budgeted the planned funds plus an additional estimated \$450,000.

On July 31, 1981, AID signed a cost reimbursement contract for technical assistance with South-East Consortium for International Development (SECID). The current value of the contract is limited to \$1.43 million.

Purpose and Scope

Our review of the Food Crops Research project covered progress from inception through March 24, 1983. The purpose of the audit was to (a) evaluate how the project was progressing toward meeting established goals and objectives, (b) ensure that AID-provided resources were efficiently and effectively utilized, (c) assess the GOS level of commitment to the project, (d) determine whether the contractor was performing satisfactorily and operating within the provisions of the contract, and (e) review REDSO/ESA's supervision of the project.

We reviewed REDSO/ESA, SECID and GOS records, reports and correspondence; and held discussions with the US Ambassador to the Seychelles, REDSO/ESA and SECID personnel, the former Permanent Secretary of the Ministry of Agriculture, and GOS officials and personnel at Grand Anse Research Center and two local extension offices. We visited the project site at Grand Anse Research Center (GAC) on Mahe Island. We found the contractor's financial records were minimal. Therefore an audit of SECID covering financial issues should be accomplished by the cognizant agency.

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The GOS Needed To Reaffirm Its Commitment To Agricultural Development

The GOS's limited commitment to agricultural development and its restricted ability are slowing the expansion and strengthening of its capability to conduct research, and to extend results to farmers.

The GOS in its 1982 Agricultural Plan declared that 1982 was the Year of Agriculture. In November 1982, the GOS cabinet of Ministers was reorganized. A new Ministry of National Development took over most of the former Ministry of Agriculture and Land Use's functions. Within the Ministry of National Development, there are several departments, one of which is the Department of Agriculture. We were not able, however, to identify any individual in charge of this department. Rather, seven agricultural divisions and about 20 other divisions covering Lands, Surveys, Water Authority, and Housing, all reported directly to the Minister and the Permanent Secretary of the Ministry of National Development.

Project personnel did not view this organizational structure as one conducive to agricultural development as they doubted whether the needs of agriculture as a whole could be in proper perspective. Citing the need for improved training, transportation capabilities, and seed storage facilities, the Chief Agriculture Research and Development Officer explained that projects to upgrade agricultural capabilities were delayed because of limited funds. Further, the Chief of Party stated that intermediate agricultural goals and objectives remained poorly defined, and communication between the Ministry and the Grand Anse Research Center was minimal.

In early 1982, a Commodity Import Program (CIP) for the importation of medium fuel oil was established with \$2 million of Economic Support Fund (ESF) monies. Initially, project personnel believed that all resultant local currency generations from the CIP would be available for agricultural development. Further, the FY 1982 CIP Program Assistance Approval Document (PAAD) stated that the \$2.0 million* worth of rupees to be generated would be used entirely to support agricultural development. The PAAD further clarified that:

* Seychelles Rupees 6.785 = US\$ 1.

"To assure that this activity (the Food Crops Research project) is adequately funded, as well as related activities (establishment of a modern soils laboratory and regional research sites) and to maximize the impact and benefits under this project, agreement has been attained with the GOS that \$0.5 million in Seychelles/ Rupees (S/R) which is generated by this A.I.D. program will be earmarked to support this on-going A.I.D. program."

This, however, did not happen. In February 1983, the Embassy/Victoria and REDSO/ESA concurred with GOS's request to use the funds for overall development--not just agricultural development. As a result, only 1.3 million rupees (\$192,000) were allocated directly for agricultural development and support of the Food Crops Research project. The remaining 12.27 million rupees (\$1.8 million) were allocated for road maintenance, water supply and drainage systems construction, and support of the Seychelles Development Bank and the Island Development Company. While some of the remaining funds will indirectly assist agricultural development, the extent of such assistance could not be determined. For example, although improved roads will make it easier for farmers to transport their produce, improved roads will also be used by public transportation, residents, and hotel and guest house patrons.

GOS personnel at Grand Anse Research Center (GAC) and the Chief of Party believe that additional funds are needed for the direct support of agricultural research, development, and extension. They stated that the GOS's limited ability to provide (a) effective counterparts to work with AID-provided scientists has restricted the transfer of technology, and (b) an adequately staffed and supported extension service has hampered the dissemination of research results. Both issues are subsequently discussed in greater detail. Since Embassy/Victoria and REDSO/ESA have agreed that a follow-on CIP is the most appropriate mode for FY 1983 assistance, GOS personnel at GAC have proposed a program of support to the GOS agricultural research and extension services using \$1.14 million of the FY 1983 CIP local currency generations. Embassy/Victoria and REDSO/ESA documentation explained that this program covered:

- Modernization of the GAC -- installing a small-scale irrigation system and perimeter fence and the procurement of agricultural machinery and two pick-up trucks.
- Support to the extension service -- improving local irrigation systems to ensure reliable storage and distribution of water, a drainage system to reduce flood hazards at an extension office, and several vehicles for improving access to farmers.
- Additional support to the Food Crops Research project, especially in entomology and soils science.

According to Embassy/Victoria and REDSO/ESA, however, assistance to this specific program under the FY 1983 CIP will be contingent upon its strong endorsement by the Ministry of National Development, and other indications that the GOS still attaches priority to development of the agricultural sector.

Conclusion, Embassy/Victoria and REDSO/ESA Comments,
RIG/A/Nairobi Response, and Recommendation

Agricultural development was so important to the GOS that 1982 was declared the Year of Agriculture. However, GOS commitment to agricultural development remains doubtful because of its downgrading of the Ministry of Agriculture and Land Use to a department, and its limited support for agricultural development needs.

Our draft audit report contained a recommendation that Embassy/Victoria, prior to the approval of the FY 1983 CIP, obtain GOS's commitment to agricultural development and GOS agreement to allocate the \$1.14 million in local currency funds necessary to support the proposed agricultural research and extension service program.

Embassy/Victoria Comments

"First and foremost, while we support the need for continued investment in agriculture, determination of how local currency is to be spent is responsibility of GOS. The fact of the matter is that we do not have sufficient information at this stage whether the Ag sector, much less the narrower field of Ag research, could possibly absorb such an injection of funds, nor are we aware of any desire on the part of the GOS to enhance the Grande Anse project at this stage. On the contrary, there is continuing debate within the Government on the future direction of Ag policy. Some argue a return to greater investment in the private sector, while others (including the present minister) remain enamoured of state farms and central use of the counterpart funds in the absence of any detailed understanding of how they would be utilized or in the absence of any clear government policy would be a mistake. While we agree that agriculture should remain an important priority for use of local currency, the decision on ultimate investment lies with the GOS and the Embassy (and ultimately, with AID/W)."

REDSO/ESA Comments

"Discussion: The determination of use of local currency generation is, in the first instance, the responsibility of the Government of Seychelles. Proposed uses are discussed with REDSO project designers to assure consistency with AID's concerns as well as the development

priorities of the GOS. The Embassy/Victoria is in a concurrence role using the guidance of REDSO as its AID 'arm'. Both the Embassy and REDSO's role in the concurrence process is to assure consistency with the overall proposed uses and mutual planning. The FY/83 CIP has been designed by REDSO, together with the GOS and includes an outline for uses of the local currency, some of which is to be programmed to support improvements of the Grand Asne agricultural research station. There will have to be a refinement and prioritization of this process.

...Just as under the FY/82 CIP, REDSO professional personnel together with the GOS will agree on what amount, if any, ought to be allocated to that project. It is a matter that requires technical professional judgement on the appropriate use and absorptive capacity for such funds. It is not a matter to be predetermined in an audit report, particularly when based on what appears to be only the Contractor's point of view. (Under the FY/82 CIP, the Contractor proposed uses for \$1.8 million of the \$2.0 million available which was considered inappropriate and not feasible.) Thus the recommendation is inappropriate in the context of the decision making process for use of local currencies and who should make that determination. It is further not backed up by any fact warranting such a specific allocation, and particularly by those technically qualified to make those judgements. This recommendation would grossly distort the project process and should be deleted."

RIG/A/Nairobi Response

We recognize GOS's responsibility for determining the uses of local currency generation, that these uses must be consistent with AID's concerns and the host country's development priorities, and that Embassy/Victoria and REDSO/ESA must concur with the proposed uses. Further, we are aware that the recently completed PAAD for the FY 1983 CIP only proposed the needed modernization of the GAC at a cost of 1.8 million rupees, or about \$276,000. In addition, because the cost of financing all proposed activities greatly exceeds the approximately 13.0 million rupees which will be generated, the GOS, Embassy/Victoria, and REDSO/ESA plan additional prioritization on the use of funds to be generated from the FY 1983 CIP. However, since the Food Crops Research project proposed to expand and strengthen the GOS's capability to conduct research and extend the results to farmers, we believe that every effort should be expended to maximize the expansion and strengthening of their capability during the life of the project. We do not view the deletion of the earlier proposed support for the extension service as conducive to

the project's achievements. As the process for determining the uses of local currency generation is one of dialogue with many factors involved, we have revised the recommendation.

Recommendation No. 1

Embassy/Victoria verify the extent of the GOS's commitment to agricultural development, and obtain financial support from the FY 1983 CIP local currency generations to maximize achievements from the Food Crops Research project.

The Transfer Of Technology Needed To Be Improved

Counterparts to work with AID-provided scientists were either unavailable or unplanned. Key personnel did not attend any training. As a result, the transfer of technology was limited.

When contractor scientists arrived in July 1981, they expected to work with Seychelles scientists in their respective disciplines. However, they found only two qualified scientists--the Chief Agricultural Research and Development Officer, and the Deputy of the Grand Anse Research Center (GAC). The other six personnel at GAC had little previous experience in agriculture, and only three had the equivalent of a high school education. The AID-financed horticulturist, plant pathologist, and entomologist have worked with the two qualified officers to the extent possible, but both officers are heavily burdened with administrative duties. Most work conducted by the contract scientists therefore has been carried out with GAC's technicians who had limited agricultural backgrounds. This situation is especially critical in plant pathology. The project paper envisioned a full time counterpart, yet the deputy Chief Research Officer, responsible for disease identification and pest management, spent no more than 10 percent of his time in research.

REDSO/ESA stated at the exit conference that the problem of insufficient and unqualified counterparts was known in advance and was reflected in the project paper. It was decided that under the circumstances the contractor would work with GAC personnel to transfer the maximum technical knowledge possible. The alternative, which was not considered feasible, was to cancel the project--leaving GOS research capabilities behind other comparable African countries. It was also known that in time significant, additional financial resources would be required to establish research capability parity. Further, REDSO/ESA believed that the expected return from abroad in mid-1983 of two Seychellois students working on undergraduate degrees would substantially improve the counterpart situation. However, updated information from contractor personnel indicated that neither student planned to return until mid-1984. As a result, the current situation may exist through the end of the project.

Although GAC personnel have or will in 1983 receive some short-term training, key GOS officials at GAC have not received the training as planned. The project paper envisioned that the Chief Agricultural Research and Development Officer would receive three months of training in horticultural and research methodology. Management duties have forced the indefinite postponement of his training. Likewise, the Pest and Disease Control Officer planned to attend three months of training in advanced plant quarantine. Since this officer is also the Deputy Chief Research Officer, responsible for extension services and counterpart to the plant pathologist, his duties precluded his absence and thus his training also had been postponed. While two key officials were not receiving the planned training, other individuals were selected for training in such areas as horticulture, plant pathology, farm management, and communications and graphic arts.

REDSO/ESA personnel believed that the reasons why these key officials had not taken their training were reasonable and practical. Further, since contract personnel had done a satisfactory job of providing training to Seychellois and all training funds should be expended by the PACD, REDSO/ESA believed this segment was progressing satisfactorily.

Conclusion, REDSO/ESA Comments, RIG/A/Nairobi Response, and Recommendation

GOS's limited ability to provide effective counterparts to work with AID-provided scientists, and the postponement of training for key GAC officials has restricted the transfer of technology.

In response to our draft audit recommendation on developing and implementing a training plan, REDSO/ESA stated:

"Discussion: We believe the narrative description, (pages 7 and 8), of the report dealing with 'the transfer of technology needs to be improved' is accurate and reflected the manpower constraints at the time of project design and approval. Therefore to make a recommendation, at this stage of project implementation, that a new training plan be developed and implemented, is in our opinion inappropriate and would serve no purpose. The GOS and the contractor have worked diligently in executing on-the-job training and third country training during the life of the project. We fail to see how a new look at the training of manpower and its constraints can change anything as long as there are limited manpower resources available in the country. One has to recognize and accept the limited objectives this project can accomplish given the ongoing constraints. The only benefit of the commentary at this point is a 'lessons learned' kind of exercise, i.e.

that given the project time frame and host country ability, one cannot expect a great deal in the way of accomplishments. Any design of similar future type activities needs to take this into consideration."

RIG/A/Nairobi Response

In December 1982, the Chief Agriculture Research and Development Officer, believing that he and his deputy should still receive some training, and that other personnel associated with agricultural research and extension needed additional training, forwarded a training proposal to the Ministry of National Development. This proposal was not approved. We view the Chief Agriculture Research and Development Officer's proposal for training as an indication that training needs of GOS project-related personnel were not being met. Therefore, in the interest of further increasing the transfer of technology during the final year of the project, we believe that additional training is necessary. We have therefore revised, but retained the basic thrust, of our recommendation.

Recommendation No. 2

REDSO/ESA, together with GOS officials, implement a training plan that meets the needs of GOS project-related personnel and increases the transfer of technology during the final year of the project.

Improvements Were Needed At Grand Anse Research Center

Equipment worth \$40,000 remained unutilized because of inadequate laboratory facilities. Water supplies were inadequate for GAC's needs during periods of little rainfall. Also thefts from research plots invalidated some variety trial results.

When the project began, a small laboratory was established for plant pathology and soils analysis. The Chief Agriculture Research and Development Officer and contractor personnel subsequently determined that this laboratory was not adequate to conduct research in the non-compatible disciplines of plant pathology and soils. In early 1982, Embassy/Nairobi*, REDSO/ESA, and GOS reached agreement on the availability of Economic Support Funds (ESF) for the Seychelles. Included were plans to renovate a building to accommodate two separate and improved laboratories on a site adjacent to GAC, and, in May 1982, \$40,000 worth of equipment was ordered. By November 1982,

* In early 1982, Embassy/Nairobi was responsible for U.S. Government relations with the Seychelles.

the equipment had arrived, and plans for using about \$100,000 of local currency generations from CIP had been approved by the Project Appraisal Committee chaired by the GOS President. Following the ministerial reorganization, the Chief Agriculture Research and Development Officer was told to resubmit the GAC proposal through the new Ministry of National Development. In early February 1983, the Plant and Soils Diagnostic Laboratory proposal was reapproved.

In mid-March when we completed our field work, funds still had not been released and renovation work had not begun. As a result, the Food Crops Research project had been hampered because the soils scientist, due to return in early 1983 for the remainder of his split contract, was still waiting for the new soils laboratory to be completed. If the soils scientist does not return by July 1983, there will be insufficient time for him to complete his contract.

Grand Anse Center is near the end of a water line. During periods of little rainfall, water is not available in sufficient quantities from the local water system to irrigate the research station's variety trials. Rather than allow variety trials to fail, water was being borrowed from a nearby hotel. The Chief of Party explained that a combination drip and spinkler irrigation system was needed for the full utilization of the coastal sands and terraces of the station. Further, a permanent irrigation system would permit continuous production on GAC lands throughout the year. A proposal to use 1982 local currency generations to install a new irrigation system was submitted by the Chief Agricultural Research and Development Officer to the Ministry of National Development. The proposal was not approved. This proposal has been included as a possible use for FY 1983 CIP local currency generations.

Theft from the GAC research plots was recognized by both the Chief Agriculture Research and Development Officer and the Chief of Party as a major problem in attempting to conduct meaningful research at Grand Anse Center. One solution to this problem would be the construction of a perimeter fence encompassing research areas and protecting them from outside interference. This was established as a priority in the National Development Plan 1982-86, and included in the GAC redevelopment project as one of the projects submitted to the Ministry of National Development for consideration for 1982 ESF funding. The proposal was turned down, and at the present time the problem of theft from the research plots continues. There is a continuous loss of both equipment (including items like irrigation pipes and fittings) and agriculture produce. The few guards employed by GAC seem to be completely ineffective. One example of the problems of losses from the research plots was a trial conducted with watermelons in which only two were harvested from the entire plot. The remainder was stolen at night. Thefts are limited to high value or easy to pick produce such as melons, cabbage, and eggplants versus plentiful items like tomatoes and beans.

Conclusion

Delays in the renovation of a building for new laboratory space has prevented \$40,000 worth of equipment from being utilized and threatens to deny the soils scientist sufficient time to complete his contract by the end of the project. Inadequate irrigation capabilities and poor security measures hamper effective adaptive research.

In mid-April, the Chief of Party advised us that the renovation for the improved laboratories had begun. The PAAD for the FY 1983 CIP proposes funds for both the irrigation system and the perimeter fence; therefore, a recommendation is not required.

Extension Service Needed GOS Support To Disseminate Research Results

The GOS extension service was neither staffed nor supported adequately to carry out its responsibilities. In addition to lacking qualified personnel to fill positions, extension workers were burdened with other responsibilities.

The project documentation proposed that two Peace Corp Volunteers assist in the communication and extension of research results between GAC and the small farmer, while helping the GOS to improve its extension efficiency. Initially Peace Corp Volunteers worked with the GOS extension service. However, GOS chose not to approve the continuation of these positions, preferring instead to staff these positions with Seychellois. The result was that extension service positions were either left vacant or filled with poorly trained staff.

When the project began, there were seven positions in the extension service. Three were vacant. There are now ten positions. Three are still vacant, and two are filled with agent designees awaiting promotions to fill their respective positions. GAC personnel planned to fill these vacancies and approve the promotions if funds are provided in the 1983 budget. However, as of March 24, 1983, the budget had not been approved. Two individuals of the extension service pointed out that they have responsibilities in addition to the dissemination of agricultural research results for fruits and vegetables. One individual spent up to 50 percent of his time on non-extension activities.

The project was established primarily to help develop the national research capabilities of the Seychelles and to conduct research on specific problems limiting the yields of food crops in collaboration with Seychellois scientists. The approach has been to introduce and test or initiate testing on over 400 varieties of fruit and 66 varieties of vegetables, and to identify seven improved practices for soil management and fertilization. In order for results of this research to have an impact on raising productivity of the small farmer, these results including new technology of new varieties must reach the farmer in a form he can understand and utilize. This is

the function of the extension service. But, because of the inadequate dissemination of results by the extension service, the Chief Agriculture Research and Development Officer and the Chief of Party were publishing research results and recommendations in the local newspaper in an attempt to reach as many individuals engaged in farming as possible.

Conclusion, Embassy/Victoria and REDSO/ESA Comments,
RIG/A/Nairobi Response, and Recommendation

GOS's limited ability to provide an adequately staffed and supported extension service has hampered the dissemination of research results. We do not believe that publishing research results and recommendations in the local newspaper will lead to a significant increase in small farmer productivity. Rather, we see a need to strengthen the GOS's extension service.

Our draft audit report contained a recommendation that REDSO/ESA, together with GOS officials, develop and implement a plan to upgrade the quality and effectiveness of the extension service.

Embassy/Victoria Comments

"We also support the need for improvements in the local extension service and have no objection to calling attention to that goal in Recommendation No. 3. But it would be totally unrealistic to believe that the current project will have any impact on GOS efforts in that direction. Project personnel continue to emphasize the need to train existing extension agents but until such time as the GOS becomes committed to extension as a critical element in its Ag policy, there is little (if anything) that SECID or AID can do in that direction. We would recommend that that recommendation be dropped as well."

REDSO/ESA Comments

"Discussion: First, to develop an effective and competent extension service requires a time period of 15-20 years. This project which terminates in 1984, could have only a minimal impact on any such effort. Hence, we feel this recommendation is not implementable in any meaningful way and should be dropped. A more meaningful suggestion which we have made to the Contractor would be for SECID and GOS to plan to organize and conduct a series of training workshops on the relevant results of the Contractor's research for the seven extension agents in the time remaining under the project.

We need also to point out that while REDSO monitors this project, it is the Contractor that has responsibility to plan and implement project activities. SECID is the party working with the GOS on a day-to-day basis and responsible for research and training. That is why we hired them. REDSO/ESA provides advice and suggestions in its monitoring role."

RIG/A/Nairobi Response

We view the REDSO/ESA suggestion to the contractor as an appropriate course of action. But, until such time as it is implemented, we have retained the revised recommendation.

Recommendation No. 3

REDSO/ESA, together with GOS officials and the Chief of Party, develop a plan and conduct a series of training workshops for members of the extension service.

APPENDIX A

List of Recommendations

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| Embassy/Victoria verify the extent of the GOS's commitment to agricultural development, and obtain financial support from the FY 1983 CIP local currency generations to maximize achievements from the Food Crops Research project. | |
| <u>Recommendation No. 2</u> | 9 |
| REDSO/ESA, together with GOS officials, implement a training plan that meets the needs of GOS project-related personnel and increases the transfer of technology during the final year of the project. | |
| <u>Recommendation No. 3</u> | 13 |
| REDSO/ESA, together with GOS officials and the Chief of Party, develop a plan and conduct a series of training workshops for members of the extension service. | |

LIST OF REPORT RECIPIENTS

| <u>Field Offices</u> | <u>No. of Copies</u> |
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