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CLASSIFICATION

# PROJECT EVALUATION SUMMARY (PES) — PART I

Report Symbol U-447

| 1. PROJECT TITLE | 2. PROJECT NUMBER | 3. MISSION/AID/W OFFICE |
|---|---|---|
| Rural Development Training | 669-0153 | USAID/Liberia |

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) 669-FY 84

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

| 5. KEY PROJECT IMPLEMENTATION DATES | | | 6. ESTIMATED PROJECT FUNDING | 7. PERIOD COVERED BY EVALUATION |
|---|---|---|---|---|
| A. First PRO-AG or Equivalent FY 77 | B. Final Obligation Expected FY 85 | C. Final Input Delivery FY 85 | A. Total $ 8,046,000<br>B. U.S. $ 5,730,000 | From (month/yr.) November 1982<br>To (month/yr.) April 1984<br>Date of Evaluation Review |

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., airgram, SPAR, PIO, which will present detailed request.) | B. NAME OF OFFICER RESPONSIBLE FOR ACTION | C. DATE ACTION TO BE COMPLETED |
|---|---|---|
| RECOMMENDATIONS | | |
| 1. Downgrade academic discipline from a "major" to a concentration or emphasis in plant science and animal science. | RDI | 9/84 |
| 2. Establish a one week orientation program for incoming students | RDI | 7/85 |
| 3. Increased time and emphasis should be placed on integration and coordination between classroom instruction and practical skills training. | RDI | 7/85 |
| 4. Responsibilities of the farm manager, head of the Plant Sciences Department and the Administrative Assistant to the Director should be reviewed. | RDI | 2/85 |
| 5. The limited area of the CUC farm required for RDI practical skills training should be identified and an agreement governing its use should be formalized. | CUC/RDI | 5/85 |
| 6. CUC/RDI administration and faculty should review the curriculum of RDI, reduce the number of courses offered, reduce the number of instructional staff by at least 2-3 and reduce the number of teaching assistants by 2. | CUC/RDI | 7/85 |

...../continued

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☒ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or ☒ Change Implementation Plan
- C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Charles Strickland, Project Officer
Oleen Hess, Consultant
Henry Barrett, Consultant
Douglas Kline, USAID
Ely Gabisi, USAID
Harrington Cummings, MOA
George Saar, MPEA

12. Mission/AID/W Office Director Approval

Signature: John Pielemeier (Acting)
Typed Name: John Pielemeier, A/D
Date: October 11 1984

AID 1330-18 (3-78)

| B. 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., airgram, SPAR, PIO, which will present detailed request.) | B. NAME OF OFFICER RESPONSIBLE FOR ACTION | C. DATE ACTION TO BE COMPLETED |
| continued/..... | | |
| 7. The salary structure and benefit package (including housing and free use of vehicles) for both teaching staff and teaching assistants should be thoroughly reviewed and compared to those for similar positions and responsibilities in other institutions, and salaries should be frozen immediately at current levels until comparable position salaries catch up. | CUC/RDI | 11/84 |
| 8. RDI's support and labor staff needs should be reduced by at least 50% to a reasonable and justifiable level prior to the beginning of year two of the Phase II Project. | CUC/RDI | 9/85 |
| 9. RDI should increase student enrollment to 200. | RDI | 9/85 |
| 10. RDI consider providing short courses and in-service training as a means of further exploiting the potential uses of RDI's facilities and staff. | RDI | 9/85 |
| 11. The right to use RDI facilities and the charges thereof should be left solely with RDI. Fees should approach the market value and should never represent a financial burden to the institution. | CUC/RDI | 11/84 |
| 12. Consideration should be given to tuition increases. | CUC/RDI | 9/85 |
| 13. A comprehensive management and financial examination should be conducted immediately with particular emphasis on strengthening the system of internal controls. | RDI Auditor | 10/84 |
| 14. Effective controls should be developed in the following areas: warehousing, payroll and vehicle use. | RDI Auditor | Ongoing |
| 15. Future agreements between RDI and CUC should state specifically those costs for which RDI will reimburse CUC and where AID funds are used. | CUC/RDI | 10/85 |
| 16. Specific tasks, responsibilities and areas of cost sharing and remuneration should be determined prior to the approval of additional support for RDI and that there be closed monitoring of the documented compliance of CUC/RDI/AID contractual obligations. | CUC/RDI | 10/85 |

XD-AAQ-931-A
ISN: 38963

# Evaluation of the

# Rural Development Institute Project

# 669-0153

Cooperative Agreement Between

Cuttington University College, Liberia

and

USAID/Liberia

Oleen Hess, Consultant
Henry Barrett, Consultant
Douglas Kline, USAID/L
Ely Gabisi, USAID/L
Harrington Cummings, MOA
George Saar, MPEA

USAID/Liberia

Monrovia, Liberia
April 2-28, 1984

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## ACRONYMS

| | | |
|---|---|---|
| USAID | - | U.S. Agency for International Development Washington Office |
| CUC | - | Cuttington University College |
| EEC | - | European Economic Community |
| GOL | - | Government of Liberia |
| MPEA | - | Ministry of Planning and Economic Affairs |
| LU | - | University of Liberia |
| MOA | - | Ministry of Agriculture, Liberia |
| NEF | - | Near East Foundation |
| OPG | - | Operational Program Grant |
| PECUSA | - | Protestant Episcopal Church United States of America |
| RDI | - | Rural Development Institute developed under the Project |
| TA | - | Teaching Assistant |
| AID | - | United States Agency for International Development/Liberia |

## Executive Summary

1. Project Title and Number: Rural Development Training 669-0153

2. Project Description and Development Problem:

The Rural Development Training Project, authorized in 1977, was designed to provide training to help meet Liberia's critical shortage of mid-level agricultural technicians and managers. Under the project, the Rural Development Institute (RDI) was established at Cuttington University College providing a two-year, sub-professional program with majors in plant science, animal science, soil science and agricultural engineering. The project funded the construction of RDI's physical plant, technical assistance to develop and adapt curriculum and conduct training, procurement of commodities, participant training to Liberianize its faculty and administrative staff and certain operating costs. The Institute has the enrollment capacity of 200 and has graduated four classes totaling nearly 300 students.

3. Purpose of Evaluation

An interim evaluation of the project was completed in November 1982. The purpose of this evaluation is to 1) assess the progress of RDI since the interim evaluation, 2) determine whether a Phase II project is warranted and 3) make specific recommendations for a Phase II project.

4. Evaluation Methodology

The evaluation team was composed of a vocational education specialist, a financial analyst, a project design officer, an assistant program officer, a planning specialist (GOL) and an agricultural specialist (GOL). The team spent three weeks at RDI. The vocational education and agricultural specialists focussed principally on the relevance of RDI's curriculum. In connection with their investigation they reviewed course materials, interviewed students and faculty, RDI's Deputy Director and Director, reviewed the requirements of the plant and animal science majors and attended several classes. The financial analyst and assistant program officer reviewed RDI's books and records, inspected RDI's warehousing, reviewed payroll and purchasing systems, investigated RDI's vehicle maintenance policy and reviewed in depth RDI/CUC's cost sharing arrangement. In connection with their investigation, they conducted intensive interviews with RDI's controller, CUC's controller and the administrative officer as well as RDI's Director and Deputy Director and the President of Cuttington University. The planning specialist and project design officer focussed on RDI staffing both at the professional and support level. They interviewed the registrar, faculty, individual laborers and the supervisory maintenance crew. They calculated the student teacher ratios, reviewed the registrar's records to assess teaching loads, interviewed faculty and discussed issues regarding reduction in the teaching staff with RDI's Director and Deputy Director. They discussed maintenance of RDI's physical facilities with all concerned parties to determine whether and where cuts in support staff could be made.

5. Findings

Despite 16 recommendations, the team concluded that project progress and institutional development have been adequate to justify continued AID support to the program.[1/] It was the team's assessment that while commendable progress had been made at RDI in the area of curriculum development since the interim evaluation, the project fell far short of its objective of increasing financial self-sufficiency. Accordingly, while the evaluation recommends a series of minor modifications in curriculum and teaching techniques, most recommendations relate directly to the management of resources, internal administration and specific cost cutting measures. The team felt that many of the significant recommendations relating to internal administration and cost cutting could be dealt with prior to submission of a Phase II PID while the more long-range recommendations could be addressed early in the implementation of the Phase II project.

6. Lessons Learned

A. Lesson Number 1

The development of new educational institutions requires significant attention to curriculum and the relevance of that curriculum to host country manpower needs. Of equal importance is the institutional capacity of the new organization to administer its resources efficiently and to make cost cutting and revenue generating measures in order to become financially self-sufficient and ultimately self-sustaining.

Since the project's inception in 1977, the Rural Development Institute has made significant progress in developing a sound and relevant curriculum. The quality of its graduates has been lauded by both Liberian government and private sector organizations. Progress in the area of administration has not been as rapid; the institution is over-staffed, significant cost cutting measures have not been undertaken, internal administrative procedures are cumbersome and other sources of revenue have not been sought. These issues are now being addressed and many will be resolved prior to embarking on a Phase II program. These administrative issues will clearly be a significant focus on the Phase II program. In retrospect, the project should have placed equal emphasis on building a sound academic program, on establishing solid administrative procedures and on insuring the self-sustainability of the RDI.

B. Lesson Number 2

When facilities are going to be shared with another institution, particularly one which is newly established, all elements of the sharing arrangements should be clearly specified in advance of the project's approval and reviewed on an annual basis thereafter.

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1/ The PES facesheet contains the 16 most significant recommendations. The text of the evaluation contains 42 recommendations.

One of the problems encountered during the evaluation was the lack of a clear definition at the project's inception as the nature of services to be provided by Cuttington University to the Rural Development Institute and the financial remuneration involved in the sharing of services and facilities. This lack of a clear understanding resulted in charges to RDI for services which their own staff was providing, for services which were not utilized for RDI students as well as the use of RDI facilities by Cuttington for which no payment to RDI was made. Further, this lack of understanding contributed in part to many of the administrative problems which the evaluation team encountered at the time of the evaluation. Finally, these misuderstandings contributed to friction between the two instituions which would not have arisen had there been a clear initial agreement.

C. Lesson Number 3

When AID enters into long-term institutional development efforts such as the Rural Development Training Project, it is critical that administrative procedures such as bookkeeping, inventory control, purchasing and personnel policies and other administrative procedures be established early on in project implementation. To ensure that these procedures are adhered to, audits should be scheduled at regular intervals.

Many of the problems cited in the evaluation regarding administrative procedures, accounting, inventory control, etc. could have been avoided had these procedures been established at the outset. Such procedures would have ensured the long-term sustainability of RDI as an institution and strengthened the institution building process. An audit early on in the project would have identified many of the problems discussed in the evaluation so that problems could have been resolved at an earlier date.

7. Recommendations

See PES Facesheet and pages 7-12 of the Evaluation.

## I. PROJECT EVALUATION SUMMARY

The Phase I OPG project purpose was to develop Liberia's in-country capacity to train sub-professional personnel for transfer of agricultural technology, methods and knowledge. This was to be practical skills oriented training, with enough agricultural science to assure a well balanced program and end product, the student. During the five-year Phase I program the academic side of the curriculum expanded from general courses in plant and animal sciences to four academic departments: plant science, animal science, soil science, and agriculture engineering. Student course load increased to 18 credit hours per term, with commensurate reduced time and emphases on practical skills training. The movement was towards converting the Rural Development Institute (RDI) into a 4-year B.Sc. degree granting department of Cuttington University College (CUC) which was contrary to the project purpose

The Phase I interim evaluation, which was completed in November 1982, identified implementation short falls and recommended: curriculum re-orientation back to practical skills training/field application of agricultural sciences; increased staff Liberianization and development; divorcing RDI from any responsibility for the CUC farm; some expansion of the physical plant and commodity procurement; and increased CUC/RDI effort in identifying sources of support. Additional AID assistance was needed, but certain corrective actions were required before Phase II could be justifiably designed.

The OPG mechanism proved unsatisfactory. The project mode was changed to a cooperative agreement between CUC and USAID/Liberia, providing a 21-month extension in which CUC/RDI were to correct the shortfalls and implement corrective actions. The current/final evaluation is to: determine and measure progress towards attainment of the project outputs, purpose and goals and, as appropriate, make recommendations for the design of Phase II. The evaluation team was composed of Douglas Kline and Eli Gabisi, USAID/Liberia, Harrington Cummings, Ministry of Agriculture, George Sar, Ministry of Planning, Henry Barrett, Financial Analyst, and Leon Hess, Vocational Agricultural Specialist.

Most of the November 1982 evaluation recommendations were implemented. The curriculum was reorganized to more appropriately attain the project's purpose. The academic student load was reduced to 15 hours. The emphases and effort on practical skills training was increased. Plant sciences and animal sciences remained discipline majors and soil science and agriculture engineering were reduced to supporting programs. The latter should be renamed rural technology to more appropriately reflect the level and type of training needed and given. Extension training should receive increased emphasis.

A Farmer Involvement Program (FIP) was recently initiated and looks promising. A student agriculture Enterprise program, patterned after Calpoly's program, is also being considered following a consultancy to RDI by a Dean from Calpoly. This is a combined student training and profit

earning program, and an income generating program for CUC/RDI. Special concern and attention will be required: to adapt this program to RDI Liberian conditions, to retain it primarily as a training function and second as a fund raising program and, particularly, to assure that the farm is not spread/expanded to RDI's operation of the CUC farm. RDI's assumption of responsibility for the farm is being continuously pursued by CUC administration. This should be specifically excluded from any AID agreement/contract with CUC/RDI

Increased time and emphasis were given to practical skills training during the extension. The team feels further improvement would result from more frequent meetings between the instructors and teaching assistants for more specific planning of the skills training and coordinating the practicals to classroom instruction. In addition, more coordination between the various disciplines instructors seems in order.

The last and recent graduating class (January '84) was very concerned about employment. Only 5 of the 45 graduates who were non-public sector sponsored students, had found jobs at the time of the evaluation. However, RDI reports indicate that not less than 85% of the first three graduating classes are employed in relevant agriculture work.

RDI currently has a professional, support and labor staff of 91 to support a student body of 160. This figure does not include part-time teachers or the maintenance, janitorial and food service staff provided by CUC under the cost sharing arrangement. Reductions in all levels of staff appear to be needed, most particularly the support and labor force. In addition salaries across the board seem very high when compared with similar positions in other areas of the economy.

Specific formulas are needed for computing all elements of the cost sharing arrangement, to assure that correct payments are made. Some services which CUC provides and collects for seem unnecessary, and amounts paid appear excessive. The initial concept was that CUC was to be supportive of RDI. The team feels that CUC may be benefiting from the project about as much as RDI.

The financial and administrative development of the program has not kept pace with the development of other aspects of the program. Financial and administrative controls need to be designed and implemented and increased emphasis needs to be placed on providing technical assistance in the area of finance/administrative/institutional management. The absence of documented rules/procedures/systems governing receipts and disbursements as well as the accumulation, recording and posting of costs deprives management of necessary data and information on which to make decisions, thereby prolonging the institutionalization process.

The Financial/Administrative analysis covers the extension phase (March 1, 1983 - March 1, 1984) and makes numerous recommendations for improving and systematizing the Administrative/Financial functions to increase the effectiveness of the Financial/Administrative area. The audit recommended in the November 1982 evaluation is being arranged for and should soon be underway.

The student re-admission policy should be seriously reviewed. It currently allows and results in a few students taking 3-4 years to complete a 2-year program. Student selection and admission, particularly re-admission policy/practice appears in need of close review.

RDI has initiated steps for improving linkages with student sponsoring/employing agencies through formation of an advisory committee composed of the respective agencies' representatives. The effort on strengthening linkages should be vastly increased.

The Ministry of Agriculture and its parastatals generally assess the RDI graduates as having good general agriculture knowledge and capacity to learn and perform skills. A recently completed manpower survey in which private sector employees were interviewed indicates general satisfaction with the graduates, although some employers indicated that their training could be more general.

RDI has made commendable progress towards establishing a two-year, practical skills oriented training institution, training sub-professional agriculturists. The overall performance under the Cooperative Agreement extension has improved over that of Phase I.

Liberianization of the staff has progressed and can be completed by Phase II end of project. Financial self-sufficiency remains an unsolved problem about which the team feels too little action has been taken by CUC/RDI, except for a very aggressive posture on using the CUC farm and RDI students as a source of income generation.

Technical assistance, construction, commodities and participant training are recommended for Phase II along with numerous recommendations for actions/changes/inputs by CUC, RDI and GOL.

## II. EXECUTIVE SUMMARY

### A. What constraints did this project attempt to overcome and who does it constrain?

Agriculture and rural development in Liberia are inhibited by a shortage of trained human resources, especially at the middle professional level, in both the public and private sectors. This shortage constrains the government's attempts to provide development services and transfer of technology to the rural population. It also constrains agricultural production and rural development due to insufficient agriculturally trained personnel in the private sector.

### B. What technology does the project promote to relieve these constraints?

The project is establishing a post-secondary, two-year skills oriented training program emphasizing animal and plant sciences supported by soil science and agriculture engineering. The school day is split between

lectures and field practicals, coordinated to assure appropriate linkage between the scientific principles and their practical application. The objective is to develop skilled, mid-level professional personnel, and to train them in technology transfer techniques, generally for agriculture extension programs.

C. What technology did the project attempt to replace?

With the initial beneficiaries, the students, none. With the final beneficiaries, the small farmers, antiquated production and management practices, such as broad-casting unimproved cereal grains and other food crops on poorly prepared seedbeds and inadequate cultivation and other production practices, animal management in which if the animal doesn't manage to be completely self-supporting it doesn't survive.

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

The planners believed that by filling this middle gap with personnel capable of advising farmers of the economic advantages of the new technologies combined with training and supervising the village level personnel in their implementation, more technology/skills would be introduced to the rural population with greatly improved chances of adoption.

E. What characteristic did the intended beneficiaries exhibit that had relevance to their adopting the proposed technology?

Where Liberia's farmers had access to technology and production inputs, which they viewed as appropriate to their circumstances, farming systems improved and production increased.

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

Farmers are beginning to adopt the technology. Specific farmer technology adoption rates are not available, but reports are favorable. The self employed farmer graduates are proving successful, with considerable spin-off to neighboring farmers. Follow-up surveys are planned for the near future.

In its first year, RDI's Farmer Involvement program (FIP) involves farmers who agree to finance costs of improved/technology inputs and implement improved practices supervised by second year students and a staff member. This is proving successful to farmer technology transfer and production improvement, and to student experience in these activities. Considerable spin-offs are expected.

There is greater demand for improved swine, goats, poultry, rabbits and pigeons than RDI can satisfy. Some farmers/institutions buy livestock direct from RDI. Some are given breed females, swine for example, with

agreement to distribute a portion of the first two litters to other farmers who agree to the same terms. Farmers bring females to RDI for breeding and return a portion of the litter, one if less than five, two if more than five, which RDI generally redistributes. RDI provides guidance on management production the first year. Overall the technology transfer is favorable, and is fully expected to increase as more students graduate and gain additional field experience.

There have been four graduating classes to date. A recently completed follow-up of the first class found that ninety-seven percent were employed by the GOL, private enterprise or self employed. With respect to the first three graduating classes, the employers are pleased with their knowledge of general agriculture and general capacity in practical skills. The graduates master relatively faster some specific skills that they did not have earlier. There are mixed reactions about the graduates' attitudes. Some employers feel that their attitudes are good. The bulk of the employers believe that the graduates look upon themselves as supervisors in a new executive role, because they have an Associate of Agriculture degree with a major in Plant or Animal Science. This is unfortunate and results largely from the project Phase I movement toward establishing RDI as a B.Sc. degree program of CUC. The November 1982 evaluation recommended that a diploma be awarded rather than the Associate of Agriculture degree.

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

The initial constraint is the lack of trained human resources. The Ministry of Agriculture and its parastatals are interested in obtaining more RDI-trained individuals. The training program is modified as needs for improvement are identified.

The graduate follow-up surveys and FIP should provide data for this purpose. An advisory committee composed of the MOA and public sector agricultural parastatal employers of the graduates meets regularly to review the training program, to share problems and their own experiences with graduates, and to recommend modifications where appropriate. Curriculum changes have been made for improving the balance between academic course load and practical skills training.

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

Only indirectly. They should be encouraged and permitted to participate on the advisory committee.

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

The graduates are employed primarily in Ministry of Agriculture (MOA) traditional agriculture extension programs, in special extension programs

in Agricultural Development Projects (ADP) and with Partnership for Productivity (PVO) and other donor supported programs in related field services. As such, they are the vehicles for general technology transfer. However, the MOA channel of employment will be affected for the duration of the GOL hiring freeze and the economic cut backs in the private seccor. The Farmer Development Program looks very promising for students and farmers.

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

The project purpose is to focus on training in practical agricultural production skills and how to transfer the skills. Classroom instruction and skills training are coordinated to enable the students to link the agriculture sciences/theory to the practical production/management application training in the field. Training enables personnel to work as part of the national agriculture services delivery system. The FIP will become increasingly important in this regard.

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

To the student beneficiaries, the effect was significant: two years of training, paper qualification, and expectations of a job. From initial assessments, the secondary beneficiaries, the farmers, also benefited. A smaller group of beneficiaries, the RDI staff, have gained experience, in some cases additional training, and employment.

Additional Comments:

Using the cooperative agreement for the project amendment and extension in lieu of the OPG used during Phase I helped resolve some of the problems identified in the November 1982 evaluation.

The project was to establish a new two-year institution from the ground up, but several extremely important aspects were glossed over or ignored in the OPG. A small library and reading room were constructed; but no books or other publications were procured, because RDI was to share CUC's library. But CUC does not offer agriculture and has very few relevant materials.

Laboratories were constructed, but appropriate laboratory equipment, materials and supplies were not procured. The same was true for teaching aids and materials. It was not deemed justifiable to address these in total during the short project extension. A limited amount of these were provided during the extension. Inadequate planning and funds for participant training of staff has resulted in a large shortfall of trained, qualified Liberian staff to assume operation of the institute. Two staff members received training for M.Sc. degrees during the extension. Five additional staff with B.Sc. degrees are required to Liberianize the staff. In addition, twelve short-course upgrading programs should be funded. Additional physical facilities are required to appropriately cater to the institute's minimum requirements.

CUC was to provide RDI with utilities, facilities and services on a cost sharing basis at a net benefit to RDI. RDI's share of these costs continue to be based on estimates rather than accurate, separate accounts maintained on each facility, utility and service. CUC students are occupying one and part of another of RDI's dormitories, requiring crowding of RDI students in the dormitories they occupy. It is the conclusion of the evaluation that CUC continues to benefit more from the project and RDI's facilities and cost sharing than RDI benefits from CUC. The comprehensive audit recommended by the last evaluation is being arranged and will soon be conducted.

To date, RDI has not attained technical and financial self-sufficiency. This was not accomplished partially due to inadequate efforts to identify or obtain external sources of support, and RDI's short period of existence.

## III. RECOMMENDATIONS

The team concludes that project progress and institutional development have been adequate to justify continued AID support to the program. There are requirements for construction, technical services, commodities, and participant training which are discussed in Section J, Phase II Requirements.

It is recommended that Phase II support for the Rural Development Institute project be given favorable consideration by AID. It is also recommended that:

1. the timing and content of the instructional program be coordinated or integrated with the production farming cycle, rather than to the rigid semester schedule, when the two do not mesh;

2. the academic discipline certification be downgraded from a "major" to concentration or emphasis in Plant Science and Animal Science;

3. the Agriculture Engineering program be renamed Rural Technology to appropriately reflect the scope, type and level of training provided and needed; and that the program not be expanded in scope or emphasis as was indicated by RDI during the evaluation;

4. early in the year, a one-week orientation should be given to first year students to ensure that they have a clear understanding of the why, what and how their training can be applied to the farmers' constraints, circumstances and conditions;

5. within the various disciplines, increased time and emphasis should be placed on integration and coordination between classroom instruction and practical skills training to optimize student training;

6. the Farmer Involvement Program be continued in Phase II with funding support from AID if necessary;

7. the work loads and responsibilities of the farm manager, head of the Plant Sciences Department and the Administrative Assistant to the Director should be reviewed and actions taken so that these individuals, who are paid by RDI, work exclusively for RDI.

8. the CUC farm be utilized for generating income, but that it be totally divorced from RDI, so far as management and operational responsibility are concerned, and that it be operated as a commercial farm with a hired farm manager and labor;

9. the limited area of the CUC farm required for RDI practical skills training be identified and an agreement governing its use be formalized;

10. the RDI vastly increase its efforts in establishing and strengthening linkages with potential employers of the graduates and assure that meaningful ongoing dialogue continues through the advisory committee and on the home site of the employer institutions and organizations;

11. the CUC/RDI administration and faculty review the curriculum, reduce the number of courses offered, possibly consolidate or combine courses, reduce the number of instructional staff accordingly by at least 2-3, and reduce the number of teaching assistants by at least 2, to achieve a justifiable student/teacher ratio;

12. the salary structure and benefit package (including housing and free use of vehicles) both teaching staff and teaching assistants be thoroughly reviewed and compared to those for similar positions and responsibilities in other institutions and the salaries should be frozen immediately at current levels until comparable position salaries catch up;

13. the RDI Administration review the support and labor staff needs and reduce the current number of personnel by at least 50 percent to a reasonable and justifiable level prior to the beginning of year two of Phase II of the project;

14. the RDI rationalize its re-admission policy and eliminate the practice of students failing and being allowed to return to take 3-4 years to graduate from a 2 year program;

15. the RDI increase student admission to 200 by wider advertisement of RDI and by offering the entrance examinations at Gbarnga and Monrovia and through the admission of foreign students;

16. the RDI admit foreign students on a space available basis at a cost equivalent to actual educational costs. Priority, however, should continue to be given to Liberian students;

17. the project purpose be expanded to include students from the private sector as well as the public sector;

18. the RDI develop linkages, convince and demonstrate to the MOA parastatals and the private sector that RDI has the competence and can cater to all their short-term in-service and two year training needs;

19. under the Phase II agreement, responsibility for all off-shore procurement, training and other project support functions which are not the responsibility of Cuttington should be undertaken by RDI's sister school;

20. representatives from the private sector should be selected to participate as Advisory Committee members;

21. the RDI explore greater use of the regional approach to training faculty and staff;

22. the RDI consider providing short courses and in-service training as a means of further exploiting the potential uses of RDI's facilities and staff;

23. the right to use RDI facilities and the charges thereof should be left solely with RDI. Fees should approach the market value and should never represent a burden to the institution;

24. the management institute internal controls to protect all income sources including meat, chicken and produce sales;

25. the staff capability in proposal writing be developed;

26. the budget plans should be written so that the costs attributed to individual line items (equipment, training, commodities, personnel, and physical facilities) can be easily identified;

27. consideration be given to increase tuition;

28. RDI advise MOA that no student be allowed to register in a semester unless the fees for the previous semester are fully paid;

29. a comprehensive management and financial examination be conducted immediately with particular emphasis on strengthening the system of internal controls. The report should be delivered to RDI and AID prior to initiating the design of Phase II;

30. effective internal controls be established over inventory and warehousing and as a minimum include:

a. a complete reorganization of the warehouse, including written procedures for periodic inventory;

b. placing the warehouse under the control of the business office;

c. design of pre-numbered triplicate requisition forms and development of written procedures for making requisitions;

d. a cardex system be introduced to control stock;

31. comprehensive payroll procedures be developed and as a minimum, include the following:

a. a payroll register be established showing the salaries, deductions and benefits of all employees;

b. the payroll register be approved by the Finance/Administration head and the Director;

c. job descriptions and documentation of appointment, salaries, and benefits be in individual employee files to provide a basis for approval of the payroll;

d. all salaries and wages, as much as practicable, be paid by check (Liberian banks accept thumb prints along with proper identification as proper endorsement for check cashing);

e. each employee sign for his or her own check unless the individual's personnel file contains a valid legal document that indicates otherwise;

f. salary and wage expenses be recorded in the general ledger from the approved payroll register;

32. a comprehensive vehicle use policy should be established that will encompass the following:

a. gasoline paid for by RDI be limited to RDI program vehicles;

b. a vehicle log system be established and monitored and that gasoline coupons be issued for official RDI business only;

c. that RDI and CUC have separate gasoline recording sheets and that copies of the RDI sheet be sent along with the bills;

d. gasoline coupons should be made out in triplicate;

e. vehicles are to be used for official business only;

33. the management institute a cost/benefit analysis of all vehicle repair costs in excess of a specified minimum. Further, the staff mechanics shop should either be adequately equipped or closed down;

34. future agreements between RDI and CUC should state specifically those costs for which RDI will reimburse CUC and where AID funds are used, the agreement should be approved by AID. At a minimum the cost sharing arrangement should include:

a. eliminating the Dean of Students cost category from the shared cost arrangement;

b. eliminating costs associated with the registrar's office from the cost sharing arrangement;

c. eliminating the Maintenance Department cost category from the cost sharing arrangement;

35. more attention should be directed toward improving financial and administrative controls at RDI. A timetable be established wherein the reimbursement of CUC/RDI shared costs be dependent on the provision of certain services including the following:

a. the proper establishment of the books and accounts to reflect the non-profit nature of the organization;

b. an effective monthly reporting and review system be established with monthly feedback from CUC to RDI;

c. standard operating procedures be established to cover, among other things, procedures for procurement, handling of petty cash, vehicles, gasoline use and warehousing management procedures.

d. personnel policies and procedures be drawn up to suit the needs of RDI;

e. authority to sign checks be limited to the Director, Deputy Director and Financial Manager of RDI;

36. consideration be given to establishing per student rates for overhead and general services that do not include fixed costs in the base criteria;

37. RDI and CUC explore ways in which the CUC faculty and staff could assist RDI in its faculty and staff development efforts;

38. specific tasks, responsibilities and areas of cost sharing and remuneration should be determined prior to the approval of additional support for RDI and that there be a closer monitoring of the documented compliance of CUC/RDI/AID contractual obligations;

39. consideration be given to the necessity of continuing the RDI/PECUSA relationship. Activities in which PECUSA is currently involved (student placement and procurement) could easily be undertaken by the sister school. This would reduce project costs and simplify project implementation.;

40. CUC identify a relevant "RDI Action Team," composed of the heads of the various areas included in the cost sharing arrangement, to monitor the institutionalization process and the implementation of the grant provisions;

41. RDI/Monrovia expediter functions be performed by CUC with the provision that documented inadequacies by CUC in this area would cause a reduction in the general service payments, and

42. the possibility of using a standard bilateral project rather than the cooperative agreement mechanism should be addressed as an issue during the Phase II project design. This would help ensure greater AID control and involvement in expenditure of funds.

## IV. INTRODUCTION AND BACKGROUND

### A. Funding

#### 1. USAID Contributions

The project was authorized on August 20, 1977, as a $2,900,000 five year OPG to the Protestant Espiscopal Church of the United States of America (PECUSA) to provide agriculture skills oriented training to help meet Liberia's critical shortage of mid-level Agricultural technicians and managers. Two subsequent project Amendments raised USAID's contribution to $3,905,000. Following the Phase I final evaluation recommendations, the program was extended to November 1984, and funding increased $1,825,000, raising USAID's life of project funding to $5,730,000.

#### 2. Host Country and Other Contributions

The GOL contributed $293,000 through June 1983, and had pledged an additional $400,000 for the Phase I extension. The GOL had contributed $300,000 of the latter amount by April 1984, for life of project funding of $593,000.

The Near East Foundation funded faculty members and other contributions totaling $163,000 for Phase I and the extension.

The EEC assistance during the project extension was $630,000.

RDI's revenue from tuitions and other receipts from CUC were $135,508 for Phase I and the extension.

Total contributions from non-AID sources during Phase I and the extension were $2,303,504 or 28.6% of total costs.

### B. The Phase I Program

The Phase I project funded the construction of RDI's physical plant, technical assistance to develop the curriculum and conduct training, procurement of commodities, participant training to Liberianize the faculty and administrative staff, and certain operating costs.

The project purpose was to develop Liberia's in-country capacity to train sub-professional personnel for transfer of agricultural technology, methods and knowledge. Under the project the Rural Development Institute

(RDI) was established at and under the administrative supervision of CUC, providing a two-year, middle level professional program in animal and plant sciences. During the five-year Phase I program, the curriculum expanded from general courses in animal and plant sciences to the four academic departments of plant science, animal science, soil science and agriculture engineering, requiring the students to carry a course load of 18 term hours. This academic emphasis and student load was intended to convert RDI into an academic four year department of CUC offering a B.Sc. degree. There was commensurate reduced time allotted for and emphasis on practical kills training.

The final evaluation in November 1982 found that despite considerable progress, RDI suffered from major shortfalls and required additional donor assistance to continue operating. Specifically, the evaluation found that: (a) RDI had to rely on donor financed expatriates for half the faculty positions; (b) curriculum and teaching methodology required more practical and less academic orientation to achieve the project purpose and outputs; (c) the large CUC farm, turned over to RDI to manage and operate as a source of income and a skills training facility, was reaching the danger point of giving emphasis to production over skills training; (d) the physical plant needed expansion; (e) vehicles, equipment, supplies and library publications were in short supply; and (f) RDI had not found or developed sources of income to meet its recurrent costs.

C. Cooperative Agreement Project Extension

A follow-on project was required to complete RDI's development and for it to become a self-sustaining institution. Too many uncertainties existed to design Phase II with confidence that it would attain the project purpose. To allow time to resolve these issues, prior to designing the potential Phase II of the project, funding for a 21-month extension was approved through November 1984. The extension was to provide time for making the changes recommended in the 1982 evaluation, and for another evaluation to assess project progress in doing so.

With the project mode changed to the cooperative agreement, AID involvement increased in accordance with AID policy primarily for approving key personnel, work plans and curriculum changes. CUC was authorized to enter into a sister school agreement for technical assistance and other support. This was done with California Poly Technical Institute (Calpoly). Alternatively PECUSA involvement could include such support as being CUC's agent for procurement and other services.

USAID financed technical assistance for the director, the topping off for three faculty members partially financed by the Near East Foundation, and three months of consultancy. The Director was to re-orient the curriculum and teaching methodology with improved coordination between class room instruction and skills training, and increase the quantity and quality of the latter. He was also to initiate programs to bring students into direct contact with farmers and the conditions and circumstances they cope with.

USAID also funded the bulk of the recurrent costs which were to be reduced during the second year. Two participants were programmed for M.Sc. training and a limited amount of equipment and training supplies were procured.

RDI has the enrollment capacity of 200 and has graduated four classes totaling 278 students. A recent comprehensive survey of the first graduating class found 97% were employed by the GOL, private enterprise or self employed as farmers, of the second and third graduating classes the employment rate of 85% is indicated and will be specifically determined by follow-up surveys. Of the fourth class of 55 recently graduated, ten returned to their positions in the MOA and five others have been employed. Private enterprise and GOL parastatals are in the process of interviewing candidates. Therefore, the number of the fourth graduating class finding employment could not be ascertained at the time of the evaluation.

## V. PROJECT EVALUATION

### A. Curriculum

#### 1. Implementation and Impact of the Curriculum Reorganization

Most of the November 1982 evaluation recommendations were implemented. The curriculum was reorganized to more appropriately reflect the agriculture sector's needs and to attain the project purpose. In doing this the staff reviewed the curriculum offering, deleting the least essential courses in the four disciplines and some elective courses, and reduced the course load to 15 credit hours. The time allotted for, and the quality of instruction on practical skills training increased and improved. The current 15 credit hour load, plus the practical skills training ,still places a heavy demand on students' time and energy. It was the evaluation team's consensus that the current academic trend, associate of agriculture degree and discipline "majors," are directed toward upgrading RDI to a B.Sc. degree following Phase II phase out. The upgrading of RDI to a B.Sc. degree program runs counter to optimum achievement of the project purpose and Liberia's priority needs.

The "majors" in plant science and animal science were retained. Those in soil science and agriculture engineering were pared down and simplified, and are offered as basic support courses to plant and animal sciences. The inadequate justification for offering a major in plant sciences and animal sciences remains. This infers academic agricultural sciences background knowledge and competence in these disciplines that graduates of a two-year skills-oriented training institute do not have and cannot possibly obtain. The RDI staff maintains that a major in plant and animal science is more appropriate to the students' accomplishments than an emphasis in these disciplines. Yet, none of the employers believe that the graduates have the knowledge or competence in animal or plant sciences that a major in these disciplines implies.

It would be unfortunate if RDI's certificates (major in a discipline and associate of agriculture degree) raised the graduates' employment position expectations unrealistically and resulted in frustrations for the graduates; and resulted in potential employer resistance to hiring the graduates because they were not qualified, competent or equal to their paper qualifications and job expectations. It is recommended that the Academic Discipline Certification be downgraded from a major to concentration or emphasis in Plant Science and Animal Science.

The RDI Agriculture Engineering offering has little comparability to an engineering program, and should not have. The EEC assistance will provide shop equipment and tools for instruction in Rural Technology including carpentry/buildings, metal work, small engines/farm power, and electric power/irrigation.

The current thinking in the Engineering program is to establish these four practical skills training areas as sections in an agriculture engineering department. Current thinking and plans will also require training of five new staff members, a department head and an instructor for each section. Since this is a supporting discipline within the overall program, and has recently been pared down for this purpose, plans for expansion back to major emphasis are neither justified nor logical, and need immediate attention and corrective action. The evaluation strongly recommends that the Agricultural Engineering Program be renamed Rural Technology to appropriately reflect the scope, type and level of training provided and needed; and that the program not be expanded in scope or emphasis as the previous evaluation had recommended against.

Discussions were held with beginning second year students, recent graduates and teaching assistants, who were also graduates of RDI. They demonstrated a good knowledge of general agriculture relative to their respective training and experience. They responded faster and more confidently on their general agricultural knowledge than on the why and how of application. They were more uncertain when asked to describe the small farmers' circumstances and conditions, and how their training would resolve the farmers' constraints. If they had had a specific orientation on the socio-economic and general environmental conditions, constraints and circumstances of the small farmers they were being trained to work with, or how the training related to and resolved these constraints, they were unable to recall or fit it together. The evaluation recommends that early in the year a one week orientation be given to first year students to insure that the students have a clear understanding of why, for what and how their training can be applied to the farmers' constraints, circumstances and conditions. The staff should also relate their classroom instruction and skills training to small farm constraints throughout the two-year program. Clarification of this in the minds and training of the students is essential.

Most of the students interviewed were just beginning their second year and, therefore, were reacting to questions from one year's

training. As stated, their knowledge of general agriculture and response to technical questions was adequate relative to the amount of classroom instruction they had received. They exhibited less apparent ability to, or concept for applying the classroom instruction to production/management practices. Since they had completed only half the program, generally introductory courses, this was expected to a degree. However, they felt their practicals were more a matter of cleaning up the animal buildings and compound and busy work in the fields rather than applied skills training.

The staff stated that the first year of out-of-classroom assignments were work details, partially to weed out students unprepared to apply themselves to field work as well as book work. This is justified to the extent that it enables the staff to assess the students' experience, capacity and willingness to work. It is not justified to the extent that the students collectively view themselves as captive labor, assigned to busy work because the staff hasn't taken time to organize the skills training. Whether fact or not, the students view it as fact.

One example cited by nearly all students was rice. They were not involved in field selection or given instruction on doing so, on seed bed preparation or growing season production practices. They were shown how to plant rice and participated in planting. They were confident no other instruction in rice production would be given. This may have resulted because seed bed preparation was done during the vacation period. If so, this is an example of why the rigid semester, non-segmented course instruction, should be more flexible. It is recommended that the timing and content of the instructional program be coordinated to the production/farming cycle, not the rigid semester schedule, when these do not mesh.

During the cooperative agreement project extension, more time has been given to practical skills training. The evaluation questions whether enough time has been given to attaining the degree of coordination that is essential between the classroom instruction and practical skills training, and to coordination between the four disciplines' course offerings. Both are extremely important. Review of the course content of the other disciplines, when it will be offered, the applicability of the instruction and skills training to small farmer problems and Liberia's agricultural and developmental needs are essential. Only in this way can the total program be integrated adequately to achieve optimum student training. It is recommended that there be increased time and emphasis placed on integration and coordination between the classroom instruction and practical skills training within the various disciplines to achieve optimum student training.

The project purpose, and RDI's reason for being, is to train mid-level professional agriculturalists for transfer of agricultural technology, methods and knowledge. The transfer can only be made if the students master the technology, methods and skills in a thoroughly coordinated and integrated classroom, laboratory and field training program. The emphasis must be on skills training in agricultural technology, methods and knowledge, and extension transfer training supported by academic and agricultural sciences classroom instruction, not the reverse.

It may be appropriate before Phase II for the RDI staff to assess all course offerings and list them in priority order, and eliminate courses where appropriate according to student load and training needs. Consolidating or combining courses may also be appropriate to eliminate any duplication and reduce the number of courses offered without reducing the total instructional program content or quality. This would be vastly easier if RDI focused on a program in general agriculture and eliminated the practice of discipline majors and an associate of agriculture degree.

2. Farmer Involvement Program (FIP)

The FIP is well planned to strengthen the students' practical skills training, and their technology transfer skills. The objectives of the program are to: (a) provide on-farm practical agriculture training to RDI students; and (b) to improve the welfare of farmers by demonstrating, firsthand, improved methods of crop and animal production.

At least for the initial stages of the program, only second-year students will be involved. It may expand to include first-year students contingent upon experience and progress. The program is designed for integration of the disciplines and practical application of classroom instruction in plant, animal and soil sciences and agriculture engineering. Groups of 20-25 students participate in an integrated farming systems approach to help small farmers resolve constraints, apply improved technologies, and increase productivity and income. Complete production cycles will be followed through on crop and animal enterprises, from planting or animal enterprise selection and erecting animal shelters, through the production cycle to harvesting and growing animals and marketing.

Six small farmers within 35 miles of RDI were selected based upon socio-economic and physio-agronomic surveys, and the farmers' willingness and capacity to comply with the following:

a. demonstrated competence in managing an agricultural enterprise (i.e. have an existing rice, coffee or cocoa farm, or swine or poultry enterprise);

b. have ownership or guaranteed rights to an area of farm land located in close proximity to RDI; and

c. be willing to sign a promissory note with RDI to reimburse the FIP for any recurrent costs incurred on his/her behalf. Payments in kind are acceptable.

Half of the participating FIP farmers are graduates of RDI, which will provide a good comparison of performance between RDI graduates and farmers with 10-11 years of general education. The FIP is just getting underway. It is therefore too early for a performance evaluation. The planning and scope are appropriate for the first year effort. The students are enthusiastic about the program.The initial assessment for the program

is very favorable. Experience gained from the first year will provide guidelines for modification and improvement of subsequent years' programs as necessary. A comprehensive set of records on all aspects of the program should be kept to measure progress and identify problems for this purpose.

The plan states that the farmers are responsible for recurrent costs. It is assumed this includes capital costs as well. It may be appropriate to extend the period of reimbursement for capital costs beyond the first year, but this can best be determined by each farmer's circumstances.

It was wise, the first year, to select farmers for the program with enterprises underway. New farmers should be selected for the program each year. It is important that the number of farmers enrolled each year be limited to a number that the program can comfortably and adequately accommodate. It is also suggested that previous years' farmers receive periodic follow-up visits for any guidance required, and for continuing long-term evaluation of the program. Annual evaluations with recommendations for FIP improvement should be prepared. It is recommended that the program be continued during Phase II with funding support from AID, if necessary. This could be in the form of seed money for a revolving fund to assure that inputs (construction materials, initial animals, seeds, fertilizer, etc.) are readily available.

3. Student Agricultural Enterprise Program

The life of project work plan proposes a Student Agricultural Enterprise Program in conjunction with the organization of an RDI/CUC farm foundation. One purpose is to generate funds from farm income to continue CUC/RDI once outside support subsidies terminate. RDI involvement with the farm is discussed below in this section. This potential problem requires close attention should the student enterprise program be initiated.

The students would operate a small crop or animal production enterprise under supervision of one of the staff and retain 50% of the profit. The primary difference between this program and the current skills training program would be the management, decision-making, record-keeping experience and profit potential in handling an enterprise. The students' time is a factor. If this is to be in addition to the current skills training, study time for students may be reduced. During discussions with students, some of them stated they had developed individual projects in an attempt to earn money, but marketing was a problem. The mess hall would only purchase their produce when they could satisfy the total demand of the mess hall for a given product on a given day. Transportation and time, plus competition of local farmers, were serious problems when attempting to market off-campus. The Proposal states that the students should conduct a marketing survey during the planning stage. This will require considerable input from the marketing, cooperative and economics instructors to help the students develop the instrument for the survey, as well as supervise and assist with interpreting the results.

A production enterprise, large or small, is not a negative training experience if it does not show a profit especially when tried for the first time. Students must be aware of the errors to which farmers are susceptible.

A vulnerability in the production enterprise activity would arise if student enterprises were allowed to be very large with a production and profit goal. This could result in production becoming more important than training/education, particularly when one of the objectives is earning revenues for institutional operation. Since this is a transfer of Calpoly's training program to RDI, careful attention to adopting the program to RDI/Liberia conditions will be essential.

The program may have potential as an input to RDI's training program; however, the evaluation urges that the issues discussed above be given very careful assessment prior to initiation and during implementation of the program.

4. CUC Farm

Responsibility for the CUC farm was transferred back to CUC, except for two (2) staff members who spend a significant amount of their time (25%) on CUC farm activities. One is head of the Plant Science Department and responsible for the RDI practicals area. The other is the assistant to the Director and is responsible for the warehouse and several other key administrative functions. This places an extremely heavy load on these individuals, and detracts from their optimum performance of either role. This should be very carefully reviewed. It is recommended that the work load and responsibilities of the Farm Manager/Head of the Plant Sciences Department and the Administrative Assistant to the Director/CUC Farm Accountant be reviewed and corrective actions taken as deemed appropriate to RDI's functions.

CUC administration continues to press for RDI to take over the management and operation of the farm as the practical skills training facility, and as a source of income for CUC/RDI. This must be avoided. When volume production with income generating targets and education compete for student time, education invariably takes the back seat. When the time and need for labor to plant, cultivate and harvest compete for student time, the classes and students lose the contest. Students are not and must not be viewed as free labor. However, they are invariably viewed and used a such when schools operate large farms, whether under the guise of skills training, or openly for volume production and income generation. Skills training does not require a large farm.

The farm can and should be used as a source of income for both institutions; however, it must be totally divorced from RDI, assuring that the RDI has no responsibility for the farm. It should be operated as a commercial farm with a hired farm manager and labor. Should the need arise for RDI student skills training on the farm this can be done without disrupting the farming operations. It is recommended that the CUC farm be used for generating income, and be totally divorced from RDI and operated as a commercial farm with a hired farm manager and labor.

A portion of the CUC farm can be used for RDI training. Should small areas of the farm be reserved for RDI skills training, this could be arranged on a formal basis. However, this must be adequate in size only for skills training, and must not involve volume production. It is recommended that limited areas of the CUC Farm area required for RDI practical skills training be identified and its "use agreement" formalized.

5. Effectiveness of RDI Training and Graduates in Meeting the Project Purpose of Transferring Agricultural Technology

There is little question that the RDI graduates are better trained for extension and general agriculture positions than the average mid-level professional field extension technician in the public sector.

The MOA indicated that they require their RDI sponsored students to return to the field during vacation periods. After graduation, they are generally assigned as territorial extension officers under the county extension officer. They perform well. The best performers are given preference for training opportunities abroad, because they are deemed better able to grasp, expand and retain the knowledge, benefit from the training, and apply it upon return. The MOA felt the new-hire graduates required in-service training for specific skills depending on their assignment, and for orientation to the MOA.

All parastatals stated that they placed the graduates in in-service training. That it is necessary for personnel trained in general agriculture to be trained in specific skills required in a particular enterprise is not unusual. RDI should not be expected to train in all specific skills for every enterprise. However, the fact that the employers see the need for training, and require it, indicates some shortfalls. The shortfalls can only be corrected if they are known and corrective actions taken.

Middle level professional connotes a position between senior level technical and/or administrative personnel, and the lower level hands-on primary farmer contact personnel. In most conventional professionalized services the mid-level professional personnel perform such middle level roles as technical training, supervision, and management with the specific role normally dependent on the type, terms and conditions of employment. However, discussions lead the evaluator to believe that assignment of RDI graduates to middle level positions will be contingent upon job experience, a wide range of practical experience, and above average skills performance, plus demonstrating an aptitude for the supervisory and leadership role.

There was general consensus on attitude of RDI graduates among the MOA and parastatals. The RDI graduates too often expressed, or by actions demonstrated, that with an associate of agriculture degree and an academic major in plant or animal sciences they should be promoted immediately to positions worthy of their academic accomplishments. In addition to such unrealistic expectations, related attitudes and resulting frustrations for which RDI policy is largely responsible, the graduates face a disincentive over salary, something they share with all public sector employees.

It is imperative that the MOA, parastatals and other graduate employing agencies play a much larger participatory role at RDI. This should include advising on means to better match training to employer requirements. Such involvement could enhance support for RDI, and placement of the graduates. This has been initiated through the Advisory Committee but requires clear direction and more concerted effort by RDI. It is recommended that RDI vastly increase efforts on establishing and strengthening linkages with potential employers of the graduates and assure that meaningful on-going dialogue continues.

B. Rural Development Institute

1. Staffing

RDI currently has a professional and support staff and labor force of approximately 91 to support a student body of 160. This does not include part-time teaching personnel hired from CARI, nor the maintenance, janitorial, and food service staff provided by Cuttington under the RDI/Cuttington support arrangement (for which RDI pays 25,800/month).

2. Teaching Staff

RDI has eleven full-time instructors as well as two Peace Corps volunteers who also teach on a full-time basis, for a total of thirteen. Additionally, RDI employs two instructors on a part-time basis from CARI who teach one to two courses per semester and has nine full-time teaching assistants. Not taking into account teaching assistants, the student/teacher ratio is 13 to 1. When teaching assistants are included the ratio is 6.5 to 1. Class size varies from 75 students for a course entitled "Introduction to Soils" to as few as 9 students enrolled in courses entitled "Soil Survey Techniques" and "Introduction to Record Keeping". As a general rule, the instructional staff teaches 2 different classes per semester with the larger required classes often divided into 2 or more sections. Course offerings at RDI average about 19 different courses per semester. A list of courses taught during the second semester of 1983 along with the class size and instructor's name is included in Annex 1.

At present, 5 of the instructional staff are scheduled to depart and/or are eligible for contract renewal at the end of this calendar year. In view of the extremely high cost per student for RDI training, the evaluation feels that the time is ideal for the RDI faculty and administration to assess the curriculum with a view toward providing more effective and efficient skills training. The team recommends that CUC/RDI Administration/Faculty review the curriculum, reduce the large number of courses offered, possibly consolidate or combine courses, reduce the instructional staff accordingly by at least 2-3, and reduce the number of Teaching Assistants by at least 2, to achieve a justifiable student/teacher ratio.

At present, teaching assistants are earning salaries which range from $450 to $600 per month. This is significantly higher than extension agents' salaries and most likely higher than individuals in similar positions at Cuttington College. MOA RDI graduates and other personnel with equivalent training and similar positions receive $230-$250. There is also an indication that teaching staff salaries may also be higher than those of counterparts at Cuttington. We recommend that the salary structure and benefit package (including housing and free use of vehicles) for both teaching staff and teaching assistants be thoroughly reviewed and compared to similar positions and responsibilities in other institutions and that their salaries be frozen immediately at current levels until comparable position salaries catch up.

3. Support Staff

For purposes of this evaluation, support staff is defined as individuals whose jobs fall into the following categories: transportation, carpenters, plumbers, mechanics, electricians, janitors, animal compound security and maintenance, grass cutters, painters, and masoners. At present, RDI has approximately 64 individuals which fall into this category. A complete list of the support staff is included in Annex 1 to this evaluation. Annual salaries for these individuals total approximately $80,000 for those on the cash payroll. When individuals such as drivers (who are not included on the cash payroll) are included, the annual cost of this support staff exceeds $90,000. This figure does not include the $260,000/year which RDI pays annually to Cuttington for janitorial service for dormitories, food service, security and maintenance of RDI facilities. The evaluation team feels that the size of the support staff is far in excess of current needs. We strongly recommend that RDI Administration undertake a comprehensive review of this staff with a view to reducing its size by at least 50 percent prior to the initiation of Phase II of the project.

In addition to reducing the size of the support staff, we recommend that the RDI review the salary structure for laborers and related support staff. It appears that the support staff is overpaid in comparison with personnel in ministries and in other universities. For example, one of the drivers is making $300/month and a carpenter $270/month. Salaries for these positions appear to be nearly double those paid in other similar institutions or the public sector. The evaluation would further recommend that once this salary review is completed, salaries should be frozen immediately at current levels until comparable position salaries catch up, if comparisons confirm that RDI's salary structure is higher than those of similar institutions. (See Annex 2 for a list of professional staff and employees and salaries.)

4. Liberianization of the Staff

Progress is being made toward Liberianization of the staff. Of the administrative staff of twelve, only the Director's position is not filled by a Liberian. There are 15 full-time instructional staff positions, of

which 12 are Liberians, two of whom are currently in the U.S. studying for M.Sc. degrees in Farm Management and Plant Science. All twelve have B.Sc. degrees; one has two B.Sc. degrees and one has an M.Sc. degree. One position in the Animal Science department is part-time, filled by a DVM from nearby CARI. This position should continue as part-time because a full-time Veterinarian is not justified for an institution of RDI's nature.

Some departments - Farm Management, Biological Science and Plant Science - are adequately staffed in numbers of personnel and levels of training. Other departments have no or inadequate Liberian staff. Agricultural Engineering has no degree level Liberian staff. Animal Science has two Liberian staff, only one of whom is full-time. Soil Science has one Liberian Staff. English has no Liberian staff.

Additional training is required. It is strongly urged that the trainees for B.Sc. degrees be selected from the respective departments' teaching assistants who have gained valuable experience in practical skills training plus additional knowledge and training in their respective disciplines. The following table and narrative outlines the number, type, level and areas of training recommended:

RECOMMENDED PARTICIPANT TRAINING

| | |
|---|---|
| Administration: | Liberian RDI Director (one academic year) |
| Agriculture Engineering/ Rural Technology: | two B.Sc. degrees. |
| Animal Science: | two B.Sc. degrees. |
| Soil Science: | one B.Sc. degree. |
| Short-term Training: | two per year[1/] |

a. Administration

Except for the Director, the Administration is fully Liberianized. The Liberian to be appointed director should be identified and programmed for a combination of specific relevant course work, on-the-job training, and possibly some institutional visitation. The latter two components of the program should be at two-year (rural, if possible) junior colleges or community colleges. The training should be non-degree, definitely not toward a doctorate, and not more than one academic year.

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1/ This limited amount of training would still allow for staff cutbacks.

Two of the remaining seven administrative staff have an MA and MBA. The other five have B.Sc. degrees. Additional training beyond that proposed is neither required nor planned.

b. Farm Management

There are currently three Liberians in the Farm Management Department, all three have B.Sc. degrees plus one has an associate certificate from the Ghana Institute of management. One of the three is currently in the U.S. studying for an M.S. degree. Additional staff and training are not required.

c. Agriculture Engineering

(See discussion, Section V project Evaluation, A Curriculum) There are no degree trained Liberians in the department. Two individuals should be programmed for B.Sc. degrees, or long-term non-degree training, one in farm mechanics and one in rural technology/industrial arts type of training. Degrees in civil, electrical, irrigation, etc. engineering are not needed to provide the most appropriate training at RDI and should not be considered. No additional training beyond that proposed is required.

d. Animal Science

There are one American and two Liberian staff in the department, one with a DVM and one with a B.Sc. two individuals should be funded for B.Sc. degrees in animal science programs designed by the RDI animal science department. No additional training beyond that proposed is required.

e. Biological Science

There are two Liberians in the Department with B.Sc. degrees, one of which is currently in the U.S. studying for an MS degree. No additional staff or training are required.

f. Plant Science

There are four Liberians in the department, two with B.Sc. degrees, one with two B.Sc. degrees and one with an MS degree. No additional staff or training are required.

g. Soil Science

There are two staff members in the department, one American and one Liberian with a B.Sc. degree. One individual should be programmed for a B.Sc. degree in soil science focusing on soil management, conservation and utilization, not on soil chemistry, etc.

h. English

The current English teacher is a Peace Corps Volunteer for whom a replacement is required. This replacement should be available from CUC or University of Liberia graduates.

i. Short-term Training

In addition to the long-term degree training, two short-term programs per year of two weeks to three months duration should be scheduled. This would be for visits to similar institutions, specific agricultural skills or teaching methods and materials training programs, either in other developing countries or the U.S.

j. RDI's Participant Training Experience

The main problem experienced was the confusion of too many parties involved in the programing, backstopping and supervision of the participants and the staff development program. PECUSA advanced the participants $450.00 to rent a house. Apparently this was to be a monthly cost AID/RDI would pay. PECUSA was also under the impression that AID/RDI should pay costs of sending the participants' families to the U.S. A review of AID participant training regulations prior to such funding actions for AID reimbursement would have avoided the confusion. The long-range Phase I problem of getting properly documented, detailed statements and supporting documentation from PECUSA continued into the project extension funded participant program. Such problems should be avoided in the future by having only one institution or party in the US responsible for the participants. Thus, it is recommended that during Phase II of the project, participant training would best be handled by the sister school institution or through AID.

C. Student Selection Process

1. Present Student Body

At present, RDI staff is sufficient to handle approximately 200 students. At the time of this evaluation, approximately 160 students were enrolled at RDI. The size of the student body has ranged from approximately 150 to 175 per year over the past three years. In 1984, approximately 15 percent of the student body were on leaves of absence from government ministries and parastatals; 5 percent were sponsored by international donor agencies and the remaining 80 percent were self sponsored. From 1979 to 1982, the drop-out rate was approximately 22 percent.

2. Student Selection Process

For admission to RDI, a high school diploma is required. Additionally, passing an entrance examination administered by RDI is also a prerequisite. The entrance examination tests the applicant's capability in

English and mathematics. Last year, approximately 400 students applied for admission and 100 were admitted. The admissions committee is composed of RDI's Deputy Director, the Registrar, and several members of the faculty who are selected on an ad hoc basis. While passing the entrance examination for admission is a requirement, discussions with faculty members indicate that students sponsored by the Ministry of Agriculture and parastatal organizations are given preferential treatment, both because of the objectives of RDI as well as their past experience in the agricultural sector. Faculty members generally felt that this experience compensated for the lack of capability in basic English and math. Interviews with faculty members also indicate, however, that the drop-out rate among those who are given special considerations is higher. Additionally, it also appears that many of those who are given special consideration require an extended period to complete the program.

The policy for "re-admission" is an unusual one. If the student fails the first year, that individual can take the admissions test again and be re-admitted. Hence, it sometimes takes students three to four years to graduate from a two-year program. Given the high cost of training under the program, the evaluation feels that the re-admission policy should be reviewed. Allowing students to take three to four years to graduate from the program is not an effective use of scarce resources, nor are they likely to be effective mid-level professional personnel. The team recommends that the readmission policy be changed so that students who fail during the first year of the program be required to wait for a period of time before being allowed to re-apply for admission.

Regarding the admissions policy, the team has a number of observations. First, the team is concerned with the apparent under-utilization of RDI's facilities. Given that RDI's capacity is 200, that staff and classroom facilities are essentially fixed costs, and that the support payment to Cuttington has not varied by the size of the student body, it would appear more cost effective to ensure that 200 students are enrolled at RDI. Accordingly, the team recommends that: (1) the admissions test be given to a larger number of students. This could be accomplished through wider advertisement of test dates and by offering the examination both in Gbarnga and in Monrovia. The larger number of students taking the test could help ensure an increased enrollment without lowering admissions requirements and might also serve to improve the quality of the student body (by increasing completion for admissions) and thereby lowering the dropout rate; (2) that the policy of admitting Liberian students only be changed to allow the admission of foreign students on a "space available" basis (with priority given to Liberian students). Foreign students should be charged an amount equal to the actual cost of education. The program could be advertised to USAID's and other donors Africa-wide.

The scope of the project purpose should be expanded to include training of private sector agriculturists now working in extension; this in a sense is currently being done. The original OPG did not emphasize training of MOA staff other than through short-term, in-service training

programs. It did not propose that a large proportion of the students at RDI be MOA on-board personnel. The general theme was to select high school graduates from the rural areas. Recruitment was to be done by advertising in the newspapers, personal contact with high school authorities and students, and contacts through MOA personnel. The institute was to assume responsibility for job placement, and the MOA had indicated an interest in selecting and subsidizing second year students who would then be committed to work for the MOA upon graduation. The MOA had indicated an interest in continued participation in monitoring and evaluation processes. The MOA stated it could absorb 60 diploma graduates per year.

The first specific mention of student selection of MOA in-service (long-term training of on-board employees) personnel was in the February 4, 1980 supplemental Grant to the project "general agriculture students will be recruited from the private sector and from students nominated by the MOA from its employees." The November 1982 evaluation recommended "the ratio be not less than 80 percent public sector sponsored, and not more than 20 percent private sector sponsored." The evaluation also stated that, the MOA is currently employing about 800 high school graduates. They would benefit from RDI's training and thereby provide the skills to speed up agricultural and rural development, and increase small farm production and incomes. Furthermore, the current economic conditions place a freeze on public sector new hires. This tends to preclude the self-sponsored graduates from this major avenue of employment. Uncertainty of placement of graduates would decrease since they would return to their positions in the public sector.

This situation remains unchanged, and for this reason the maximum number of students possible should be recruited from public sector employees. It does not appear from reviewing the project documentation or the current project purpose that private sector agriculturists were to be precluded from RDI training. The students have been largely from the private sector and self-sponsored categories. The project purpose, however, should be expanded to specifically include private sector agriculturists if such change is deemed necessary. It it recommended that the project purpose be changed to include the training of public and private sector mid-level Agriculturists for transfer or direct production application of agriculture technology, methods and knowledge.

D. Student Placement and Follow-up

AID has contracted for a manpower survey to determine the future needs of RDI graduates. The contractor is now interviewing both private and public sector employees regarding the relevance of RDI training, as well as projected job opportunities for graduates. Unfortunately, the results of this survey are not yet available. RDI's past record on the placement of its graduates is impressive. As shown in Annex 3, of the 199 students who graduated during the period from 1980 to 1982, only 13 or approximately 7 percent of these graduates are unemployed. There are an additional 13 students who have not been located, but even assuming that these are unemployed the percentage of graduates placed over the past three years is

in excess of 85 percent. This is particularly remarkable considering the continual decline in Liberia's economy. Of the employed graduates, 36 are employed by the Ministry of Agriculture, 80 by Agricultural Development Agencies and Private Companies, 11 by RDI, and 29 are in other teaching related positions. Annex 4 lists the 1982 RDI graduates by name and employer.

In interviewing students and faculty, it appears that the RDI administration plays no active role in the placement of students. There is no "P.R." program per se through which RDI promotes the quality of its graduates to potential employers. Because of RDI's excellent placement record, the evaluation will not recommend the initiation of such a campaign immediately. However, we strongly urge that RDI continue to closely monitor the placement of its graduates with a view toward more promotion in the future should the placement rate begin to decline.

RDI has made no effort to contact graduates to discuss the relevance of the curriculum to their current jobs. The team believes that feedback from graduates could serve to improve the curriculum. Accordingly, we recommend that RDI make an effort to systematically contact past graduates (perhaps through the design of a questionnaire) for their input on the relevance of RDI's curriculum and solicit suggestions for curriculum changes.

E. Institutional Relationships

1. Cuttington University College

The CUC/RDI relationship is largely contractual for which RDI pays for such shared services as electricity, water, mess hall, general maintenance services and administrative services. Appointment of personnel, policies, regulations, academic matters, student affairs, etc. are subject to CUC approval. CUC is represented on the advisory committee formed to improve linkages with the wider community.

The relationship and linkage between CUC and RDI are closer than those between any other two Liberian institutions. The previous excessive supervisory role CUC played is being relaxed and this should be continued. The difference in the purposes of the two institutions virtually require policies, regulations and administrative functions more specifically appropriate to these differing purposes. This can be done and still keep RDI's policies compatible with CUC administrative oversight. Overall the relationship has improved during the extension and is expected to continue improving.

2. Ministry of Agriculture

The MOA will very likely be the largest employer of RDI graduates. Being the largest potential employer of graduates, and thereby a large contributor to the budget, implies an active, continuing participatory role in RDI. Linkages and good rapport are particularly important between MOA and RDI.

Perhaps not totally, but at least partially due to this, the MOA and its parastatals established and later expanded their own short-term in-service training programs. They are currently conducting in-service training programs for their own staffs. This detracts from their major responsibility of production and providing agricultural and rural development services. If relieved of this in-service training responsibility, full attention could be focused on their particular targets and purpose, resulting in increased efficiency and effectiveness. The funds being expended on the in-service training, if allotted to RDI, would have the support and resources and could satisfy most of Liberia's private and public sector requirements for agricultural mid-level professional, and much of its in-service training. This will only be done, however, when these institutions are convinced that RDI graduate's and in-service training programs satisfy their requirements. This will require that close relationships are formed, maintained and strengthened by frequent contact. Establishment of the advisory committee was a first and important step. Continued communication regarding the type and content of training is essential. It is recommended that RDI vastly increase its linkages to the MOA and parastatals and its efforts to demonstrate to them that RDI has competence and can cater to all their short-term inservice and two year training needs.

3. California Polytechnical Institute

Under the cooperative agreement CUC/RDI established a sister school relationship with California Polytechnical Institute (CalPoly) and contracted with it to provide a director. Ideally, a similar arrangement under a bilateral contract will continue in Phase II, with technical services, commodity procurement, participant training and other off-shore support shifted to the sister school.

The sister school relationship is developing satisfactorily. Initially there was some confusion between PECUSA and CalPoly over programing, backstopping and supervision of participants. This is being resolved. It is recommended that under the Phase II project the university-sister school be given responsibility for all off-shore procurement, training and other project functions that CUC does not handle directly. This would specifically identify responsibility and eliminate confusion over procurement and related support problems in the future.

4. Advisory Committee

Improved linkages and ongoing dialogue were instituted with potential RDI graduate employers through establishment of an advisory committee composed of representatives of the public sector employing agencies. The committee is serving a very useful function for RDI. Since the members represent employing agencies, deficiencies in training can be identified for corrective action. However, private sector agricultural production enterprises are not represented on the committee. This is a

potential source of direct funding support, or for sponsoring students, and as employers of graduates. In addition, they undoubtedly would have valuable experience to add to committee deliberations. It is recommended that representatives from the private sector be considered for committee membership.

The committee meets regularly and has recommended that two courses be added to the mandatory list and one elective added to the curriculum. The academic course load must not exceed 15 credit hours per term and the practical skills training must be conducted at not less than the current time allotted. Continuous effort should be made to improve skills training and better coordination with the academic courses. Additions should be made only through dropping of other elective or required courses, not increasing student load. It is suggested that the ramifications of and impact on the total program be carefully considered relative to making additions or changes in the curriculum.

5. European Economic Community (EEC)

EEC has approved $630,000 for the construction and equipping of a Rural Technology Facility and two classrooms, and for other commodities. The team does not feel qualified to fully assess this aid, but assumes from the size and scope of the assistance package, the relationship is good.

F. Institutional Development and Institutionalization

1. The Cooperative Agreement

The overall performance under the cooperative agreement project extension has improved over that of Phase I. An independent audit is planned for the near future and must be implemented before design of a Phase II program begins.

Means for reducing costs of RDI training are being reviewed, but have not been fully implemented. Collection of rent for the staff house and dormitories used by CUC increased income. Returning the farm to CUC avoided the potential for a $70,000 deficit experienced during Phase I. Sale of three uneconomical vehicles raised funds for purchase of a pickup for student off-campus transportation. The Director has not permitted cost overruns on the budget as experienced in the past. These actions have resulted in savings.

RDI has experienced difficulty in obtaining itemized statements from PECUSA on costs for services rendered. AID advised RDI and PECUSA that reimbursement required detailed statements, that reimbursement was contingent upon properly prepared documentation and that a cable request for transfer of funds was unacceptable. All other required actions have been taken and reports prepared and distributed in accordance with the Agreement.

2. Life of Project Work Plan

The Life of Project Work Plan was prepared when required. The Plan proposes continuation and improvement of the program as recognized in the Cooperative Agreement. Recognizing the potential for rental income for seminars and training programs during school vacation, the Plan proposes investigating leasing possibilities as a means of raising funds.

The Plan proposes the following improved financial management:

— Negotiate overhead rates with CUC to reflect the actual dining room and utility costs during RDI student vacations. This will avoid confusion over the division of lease payments between CUC/RDI as recently occurred over the Peace Corps payment for use of RDI's facilities.

— Base the payment of off-shore services, provided by sub-agreements, on written requests for RDI supplies and services. Remuneration to the sub-contractors for services should be paid for at the rate of 6% of the FAS value of the transactions. This will require the detailed statement of services required for reimbursement. It will also avoid the recent participant training supervision problem.

— Make off-shore recruitment the responsibility of the sister institution sub-agreement to be paid out of their overhead and other agreed fees.

3. RDI Authority for Administrative Functions and Institutional Decision Making

The authority is somewhat improved but should increase. RDI was developed on CUC property as an institution under CUC and this it will remain. However, the vast difference in the purpose and functions of the two institutions requires that policies, administrative regulations, operating procedures and related functions be developed appropriate to the needs of each institution. Institutional autonomy should be adequate to permit RDI to develop its potential institutional capacity and perform its projected role.

The formula and system for charging SHARED SERVICES between CUC and RDI, on an actual per student comparative cost, has not been worked out. The monthly amount of $25,800 is being paid to CUC by RDI. Since the payment was made regularly without demand for detailed back up data, there was little incentive for CUC to change the arrangement. (See section II-9)

G. Financial Analysis and Viability

1. Determination of Yearly Income and Internal Controls Over Revenues

Project revenues were received from a number of sources during the project extension. Total revenues received during FY 83, the first ten

months of the extension, amounted to $888,158 and for the first three months of FY 84 amounted to $585,007. RDI's FY 83 covers the period from March 1, 1983 through December 31, 1983, and FY 84 from January 1, 1984 through December 31, 1984. AID, however, continued to be the major supporter of the project, contributing $701,772 during FY 83 and $552,278 during the first three months of FY 84, representing 79 percent and 94 percent respectively of the FY 83 and FY 84 totals. Other project contributions come from the Protestant Episcopal Church of the USA (PECUSA), Near East Foundation (NEF), Government of Liberia (GOL) and internally generated funds from tuition, farm sales and facilities rentals. Exhibit A shows the contribution totals.

All contributions, except those of the Near East Foundation, were in cash. The NEF provides salaries for three RDI expatriate employees. The employees are paid by NEF at local rates in Liberia. USAID funds make up the difference between the local salary and the negotiated contracts. Salaries accounted for $31,042 of the NEF's $43,072 total FY 83 extension contribution. In addition to salary support, NEF contributions included tools, books, regional agricultural training and a cash contribution of $5,000 for a new Farmer Involvement Program during FY 84.

EXHIBIT A

RDI Income Generation

| | FY 83<br>3/1/83 - 12/31/83 | FY 84<br>1/1/84 - 3/21/84 |
|---|---|---|
| U.S. Agency for International Development | $701,772 | $552,278 |
| Government of Liberia | 93,000 | -- |
| Tuition, Farm Sales and Facilities Rentals | 50,344 | 19,964 |
| Near East Foundation | 43,072 | 12,765 |
| TOTALS | $888,158 | $585,007 |

Internally generated revenues from tuition, farm sales and facilities rentals accounted for $50,344 or 5 percent of total FY 83 revenues. Exhibit B shows the sources of internally generated revenues. While tuition is limited by the number of students and their ability to absorb any increases, facilities rentals and farm sales has the most potential for expansion. Facilities are rented out for conferences and seminars and fees are shared with CUC. Oftentimes negotiations are concluded without input from RDI representatives, thereby making rental proceeds, and the fairness thereof, difficult to assess. CUC also rents a dormitory from RDI during the school year for which it pays RDI $100 per

student per semester. There was one instance noted wherein the facilities were used and RDI was not compensated. It is the responsibility of the RDI Director to insure that RDI facilities are used for maximum benefit to the program and that a fair price is exacted for non-RDI facilities use. Considering the cost of repairs and maintenance of dormitories, estimated at $6,000 per dormitory per semester, $100 per student as rental is extremely low and represents an added cost to RDI of at least $3,200 per annum. (Estimated repair costs of $12,000 per year less $8,800 dormitory rental fees received.) This amount is increased by forgone receipts from alternative uses like conferences, seminars and workshops. It is understood that the amount paid to RDI by CUC represents the amount charged to the CUC student as room fees. It costs CUC more than $100 per student per semester to house students and this difference is subsidized by contributions from CUC supporters for which RDI does not benefit.

EXHIBIT B

RDI Internally-generated Revenues

| | FY 83<br>3/1/83 - 12/31/84 | FY 84<br>1/1/84 - 3/31/84 |
|---|---|---|
| Tuition | $ 19,400 | $ 12,752 |
| Farm Sales | 13,799 | 2,141 |
| Facilities Rental | 17,145 | 5,071 |
| Totals | $50,344 | $19,964 |

It is recommended that RDI consider providing short courses and in-service training as a means of further exploiting the potential uses of its facilities and staff. Additionally, the right to use RDI facilities and the charges for use of these facilities should be left solely with RDI, fees should approach the market value and should never represent a burden to the institution.

Farm sales accounted for $13,799 or 27 percent of the internally generated funds during FY 83. Considering the revenues spent in this category and the size of the holdings, we would have expected more receipts from farm activities. While it is our view that commercial farming and training aspects of the program must be separated, controls over the production and sales proceeds from the skills training activities should be adequate to insure that all costs are necessary, that costs incurred generate reasonable revenues, and that all revenues are used for program purposes. Controls over production and sales were inadequate to provide reasonable assurance that all meat and produce sales were received.

Production records for pigs and cows documenting how many were killed, weight and etc. were unavailable. The number of deaths versus the number of slaughtered animals were not recorded. The sales process

includes dressing the slaughtered animal, preparing a 2-copy sales receipt, forwarding one copy to the business office and retaining one copy for record purposes. There were no beef sales receipt copies on the animal compound, and the copies kept in the business office were incomplete (several pre-numbered receipts missing). However, business office sales receipts showed beef and pork sales of $1,416 and $3,842 respectively for the period. There were two animal inventories taken in 1983, in April and September. Shown in Exhibit C is an analysis of revenues generated given the inventory shrinkage for cows and pigs. The analysis does not take into consideration births, deaths or animals given to farmers as part of an outreach program, and donations for fund raising because records were not available to substantiate the extent of these items.

EXHIBIT C

RDI Animal Sales Analysis Inventory

| Animal | April 83 | Sept. 83 | Shrinkage | Net Receipts | Pounds of Saleable Meat Animal |
|---|---|---|---|---|---|
| Cattle | 43 | 31 | 12 | $1,416 | 78 |
| Goats | 17 | 17 | — | — | — |
| Sheep | 10 | 8 | 2 | — | — |
| Pigs | 90 | 58 | 32 | 3,842 | 80 |
| Rabbits | 19 | 16 | 3 | — | — |
| Layers | 47 | 40 | — | — | — |
| Pigeons | 48 | 48 | — | — | — |
| Eggs | — | — | — | — | — |

Pounds of saleable meat per animal was calculated by dividing the total receipts by the price per pound and dividing this quotient by the net animal shrinkage.

Receipts include only those processed between April 1983 and December 31, 1984.

Chicken sales appear to be more orderly with records being maintained on both sales and production, including deaths, training and gratuities. Chicken sales are made on the average every nine or ten weeks. Duplicate receipts are used and one copy is maintained on the animal compound while the other is sent to the business office. An inventory of chickens for sale is taken before the sale begins. Sales control was lacking because the invoice was made in pounds with no

reference to the number of chickens. It is recommended that chicken sales invoices show weight and the number of chickens sold. This would allow for an easy quantity reconciliation at the end of each sale as well as provide valuable production data as to the average weight per chicken.

Beef and pork are sold at $1.50 per pound while chicken is sold at $1.75 per pound dressed and $1.70 per pound live. The market prices for beef, chicken and pork as well as the potential increase in revenues is shown in Exhibit D. The analysis shows that potential revenues from farm animal sales are 22 percent more than actual sales. Sales at the market rate are not expected to affect demand since over 90 percent of the animal sales are to RDI and CUC staff and are on a credit, payroll deduction basis.

EXHIBIT D

RDI Beef, Chicken and Pork Sales

| | Price per Pound | | Difference | | Proceeds During Extension Phase | |
|---|---|---|---|---|---|---|
| Meat | RDI | Market | $ | % | Actual | Potential |
| Beef | $1.50 | $1.75 | .25 | 16.6 | $ 1,843 | $ 2,149 |
| Chicken | 1.50 | 2.00 | .50 | 25.0 | 9,441 | 11,801 |
| Pork | 1.50 | 1.75 | .25 | 16.6 | 3,921 | 4,572 |
| TOTALS | | | | | $15,205 | $18,522 |

| | |
|---|---|
| Actual Sales | $15,205 |
| Potential Sales | 18,522 |
| Difference | $ 3,317 |
| Percentage | 22% |

Chickens represent 62 percent of meat sales. While research show the Gbarnga market price at $2.00 per pound, the Government approved price is $2.25 per pound. Subject to the limitations of commercializing the training process, it is recommended that all meat and produce sales should be at the market price. In addition, as shown in Exhibit C, the RDI had on the average 40-45 layers during the year. There were no recorded sales of eggs during the extension, nor does it appear that this was ever questioned. It was felt at one point that all the eggs were hatched into chickens. However, available records and discussions with staff indicated that all chickens were purchased as day old chicks and that differences between inventory of chickens for sale and day-old chick purchases were recorded as deaths. It is recommended that management institute adequate internal controls to protect all income sources.

Agriculture in Liberia has received priority rating in the overall scheme of development activities. Foreign donors, as is evidenced by AID's support of the program, also feel that the cornerstone of development in developing countries is agriculture. RDI is an excellent concept in that it's objective is to transfer improved agricultural technics to farmers. RDI should capitalize on the attractiveness of this concept to church, civic, governmental, foreign governments and foreign non- governmental organizations. As shown in Exhibit A, 21 percent of FY 83 funds were from non-AID sources, which is admirable. However, in the first three months of FY 84 only 6 percent of funds received were from non-AID sources. Non-AID funds generating capacity should be vigorously expanded to enable RDI to meet its target of reducing the AID share of operating costs to no more than 60 percent by the end of the second year (FY 84).

The RDI fund raising efforts must be institutionalized if RDI expects to decrease it's dependency on AID funds and become financially self-sufficient. Institutionalization of the fund-raising effort should include, as a minimum, the following components:

— Proposal writing.

It is recommended that staff capability in proposal writing be developed. No organization is willing to provide funds for training unless the request is presented in a well documented proposal. There is currently a technical writing person on staff at the RDI, a Peace Corps Volunteer. Proposal writing workshops should be conducted as part of staff development with the objective of each workshop preparing a proposal for a segment of the RDI operational activities. Linkages should be established with civic, governmental and non-governmental organizations for funding or leads to other funding sources. It is important that the nature and type of assistance normally given by the donor be understood prior to solicitation.

— Long-range plans and budgets segmentalize as much as reasonable and practicable.

This is an integral part of the proposal writing process. The program needs to be well documented, knowing where its deficiencies are and flaunting its positive aspects. Experience shows that donor organizations are established to assist in solving various felt needs. Individual donor doctrines favor a particular type of assistance. For example, some prefer to provide technical assistance, books and periodicals or cash for equipment commodities and salary support. Long, medium and short-range plans should be drawn up in such a way that the donor will be able to select from the whole plan, that portion the donor organization favors, is financially willing to support, and all within the time frame seen as satisfying a felt need. It is recommended that plans and budgets be drawn up in a fashion that clearly identify funding requirements for training, equipment, commodities, personnel, and physical facilities.

— Community support through contributions, sponsoring of students and commitments of job placements.

Contributions to the program, sponsoring of students and the solicitation of commitments to place RDI graduates are just a few of the many ways in which community support manifests itself. Current RDI marketing efforts are limited to the periodic newspaper advertisement notifying prospective applicants of the entrance examination date. It is recommended that a more vigorous marketing effort be undertaken to inform the general public about the program, its doctrine and why it should be supported. Guest lecturers from the many private agricultural concerns in the country would increase private sector awareness of RDI and would provide an excellent opportunity for contact between the student and people in the world of agriculture. Open house or other activities designed to bring the student in contact with potential employers should be encouraged.

2. Tuition Increase

The Phase I evaluation recommended an increase in tuition as a step to generating income. When RDI first opened its doors to students, tuition was free. By 1980 tuition for students was set at a token $30.50 per semester, 80 percent of which were registration fees. In 1981 there was an increase of $75 per year which put tuition at $105 per semester and the tuition for 1984 academic year was set at $140 per semester.

These increases did not reflect the $50 annual increases as recommended in the first evaluation. According to the recommended schedule, by 1987/88 tuition would be $450 per year. Current students feel that the quality of instruction is high and that they would be willing to pay for a good quality education.

There is an increasing number of organizationally sponsored students in the program. The Ministry of Agriculture pays its students cadet salaries while they are in training. Cadet salaries range from $150 to $200 per month depending on the student's tenure with the Ministry of Agriculture and other factors determined by the Ministry. There are currently 32 MOA students enrolled at RDI. The EEC sponsored several students in the program for 1983 and there is currently an RDI proposal before the EEC which includes sponsoring 45 students from 1984 through 1986. Increased public awareness and increased linkage efforts with parastatals, government agencies and the private sector should increase both the number of sponsored students and the number of financially qualified applicants. The larger the number of sponsored students, the higher the probability that increases in tuition will not have negative effects on applicants. It is recommended that consideration be given to increasing the tuition schedule by a minimum of 10 percent.

3. MOA Tuition Payments

The present system of paying tuition for MOA staff attending RDI is less than satisfactory. MOA tuition payments for its staff are, in most cases, paid by the staff themselves when they receive their checks from MOA. It therefore becomes difficult for the MOA staff to pay their full tuition during the prescribed registration period.

Some of them register late and miss classes. For instance, for the first semester of 1984 out of 35 students from MOA only 15 have actually paid their tuition in full. The rest, over 50 percent, still owe RDI a total of $1,735. It is recommended that arrangements be made between RDI and MOA to insure full payment of fees by MOA students and that no student be allowed to continue in a subsequent semester if his fees for the previous semester are unpaid.

4. Internal Controls over Expenditures

RDI does not have a control conscious environment. Administrative and financial controls are lacking in a number of respects, including control over revenues and major expenditure areas such as warehouse management, gasoline consumption, payroll, and vehicle maintenance. Due to the significant lack of administrative and financial internal controls, we could not determine the propriety of receipts and expenditures. It is recommended that a comprehensive management/financial examination be conducted immediately with particular emphasis on management letter comments aimed at stengthening the system of internal controls. The report should be delivered to RDI and AID prior to initiating the design of Phase II. Controls over revenues are discussed in section H-1. The discussion in this section is limited to expenditure controls.

a. Warehouse Management Controls

During the evaluator's tour of the warehouse, it was noted that the warehouse was untidy, goods were not arranged orderly, and damaged and useless materials were included among useable stock. The inventory is not taken on a regular basis and records in the business office were inadequate to determine what was supposed to be on hand at any point in time. An inventory was taken a day before we arrived for the evaluation. A check of the inventory revealed that not all items on the inventory list were in the warehouse and not all items in the warehouse appeared on the inventory list. For example, six mattresses shown on the inventory list could not be located in the warehouse nor was there evidence that they were requisitioned during the normal course of business. Five were seen at CUC. However, during a return visit for confirmation they could not be located. The whereabouts of the sixth mattress is still unknown. Recent purchases of building materials were found in the carpentry shop and was not inventoried. There were no inventory instructions issued to the count team members nor were there any signs of preparing the warehouse for count.

RDI uses a stock requisition procedure to issue goods from the warehouse to the requesting departments. The administrative assistant to the Director is in charge of the warehouse.

The one-part requisition is filled out by the requesting department head and forwarded to the Administrative Assistant who approves of the requisition, unlocks the warehouse door and issues the materials. Since the requisition is one-part and is not pre-numbered, there is no way to determine if all requisitions are on file or if all requisitions were

for program purposes. Most of the departments that request materials are under the control of the Administrative Assistant. In addition to warehousing, the Administrative Assistant is responsible for maintenance, student activities, employment, public relations, security and transportation as well as being the Accountant for the CUC farm.

It is recommended that adequate internal controls be established over inventory and warehousing and, as a minimum, should include the following:

1) a complete reorganization of the warehouse, including written procedures for periodic inventory;

2) the warehouse should be under the control of the business office;

3) pre-numbered triplicate requisition forms be designed and written procedures established for making requisitions, and

4) a cardex system be introduced to control the recorded accountability of stock.

b. Payroll

RDI's annual gross payroll amounts to $300,300 of which $78,798 is paid out in cash to over 60 people classified as laborers. The reasoning for their classification as laborers is unclear but it seems to have something to do with their being paid in cash. The payroll procedures include the preparation of a payroll worksheet showing gross salaries and deductions, plus benefits and arriving at a net pay for each employee. Individual disbursement vouchers are then prepared for each employee (over 101 for the past two years). The disbursement voucher shows the employee's name, his gross salary, various deductions and benefits and the employee's net salary. The payroll check, including a single check for net cash payroll, is prepared and sent to the Director for voucher approval and check signing. A review of the process (there are no written disbursement procedures, payroll, or otherwise) showed that the file copy of the disbursement voucher for check and cash payroll does not bear an approval signature nor does the payroll worksheet bear an approval signature. A significant amount of the laborers sign by thumb print and the process is unnecessarily time consuming and is void of any controls to insure that all disbursements are in fact paid to RDI workers and that amounts paid are at approved rates.

Interviews with laborers indicated some discrepancies in the amount of money they were being paid as listed on the cash payroll, and the amount of money actually being received. Elimination of the cash payroll would alleviate these problems.

Budgeted salaries and wages for FY 83 are $275,000 or 38% of total operating costs and 23% of total budget. Such a significant cost

factor should not be void of adequate internal controls. We recommend that comprehensive payroll procedures be developed and as a minimum, should include the following elements:

1) a payroll register be established showing the salaries, deductions and benefits of all employees;

2) the payroll register be approved by the Finance/Administration head and the Director;

3) job descriptions and documentation of appointments, salaries and benefits be in individual employee files to provide a basis for approval of the payroll;

4) all salaries and benefits, as much as practicable, be paid by check (Liberian banks accept thumb prints along with proper identification as proper endorsement for check encashment);

5) each employee sign for his or her own check unless the individual's personnel file contains a valid legal document that indicates otherwise, and

6) salaries and benefits expense be recorded in the general ledger from the approved payroll register.

c. Gasoline Consumption

Requests for gasoline are made through the issuance of a coupon for each vehicle from Monday through Saturday. In cases when a vehicle has to travel to Monrovia, that vehicle is entitled to a full tank. All other vehicles that travel to Gbarnga and its environs are entitled to 5 gallons each per day. The driver assigned to each vehicle collects the coupons and presents them at the gas pump which is under CUC control. Upon the receipt of the coupon the vehicle receives gasoline and the driver signs a sheet that records this information. The coupon design requires three signatures, however the Administrative Assistant alone can approve gas requistions.

The comptroller at CUC indicates that he has instructed the attendant to issue a receipt to the drivers which they are to deliver to CUC or RDI depending on who owns the vehicle. An examination of the records shows that not all the gasoline requested was in fact issued. In some cases, there were no indications that the driver received the gasoline. Bills to RDI are based on the number of gallons issued during the month. RDI does not check the gasoline record sheet as to the accuracy of the bills. One list submitted to RDI by CUC for the vehicles that received gasoline included non-RDI vehicles. In a number of cases the coupons did not state how many gallons are required for a vehicle to go to Monrovia; the order on these coupons was to "fill the tank." Vehicles are used for personal pleasure during the week and on weekends and there appears to be no distinction between RDI gasoline and private gasoline. Only one of the staff who are assigned vehicles owns a personal vehicle.

d. Vehicle Usage

It was noted during the evaluation that the Director, Deputy Director, Comptroller, and a faculty member do not own personal vehicles. In each of these cases, they have full-time access to RDI vehicles which they use on a full time basis for both official and personal use, Accordingly, it is recommended that a comprehensive vehicle use policy be established that will encompass the following:

1) that the vehicles that receive gasoline paid for by RDI be limited to RDI program vehicles;

2) that a vehicle log system be established and monitored and that gasoline coupons be issued for official RDI business only;

3) that RDI and CUC have separate gasoline recording sheets and that copies of the RDI sheets be sent along with the bills;

4) gasoline coupons should be made out in triplicate, and

5) vehicles not on official use should be parked.

e. Vehicle Maintenance

During FY 83, $18,000 was expended to overhaul the engines and perform repairs on two vehicles. One vehicle, a 350 Ford truck, has been in the garage for almost a year. The reasons for the long repair time is unclear. A Chevrolet Citation was repaired by a garage in Monrovia and similar repairs were done at a garage in Gbarnga. To date, it is still in the garage and there has been no decision as to whether the Citation should be written off or to spend additional money for repairs.

Most vehicle repair work is done by private garages, although RDI has several mechanics on staff. Vehicle repair costs would be lower if staff mechanics were used, where practicable, instead of private garages. However, it is the evaluators' understanding that the mechanics have little or no tools to work with.

It is recommended that management institute a cost-benefit analysis on all repair costs in excess of a specified minimum and to either equip staff mechanics with the required tools or close down the RDI mechanics shop.

5. Compliance With the Cooperative Agreement to Reduce AID's Share of Operating Costs to 60%

AID share of the $789,800 budgeted operating costs is $437,300 or 55 percent for FY 84. If RDI maintains the AID share of CUC overhead to the budgeted amount for FY 84 ($162,300) and keeps salaries within the prescribed budgetary limits, which shouldn't be a problem, then it would be able to keep AID share of operating costs to no more than 60 percent of the budgeted amount.

We don't, however, expect the RDI to have enough money to spend the $789,800 allocated for this category. Budgeted GOL input for this category is $246,000 or 31 percent, and as of the end of our evaluation field work, there have been no GOL FY 84 inputs. For the purpose of this evaluation, FY 1984 is from January 1, 1984 through November 30, 1984. GOL FY 84 is from July 1, 1983 through June 30, 1984. The last GOL contribution prior to the end of field work was received in November 1983. Based on discussions with management and given current economic conditions, we expect RDI to spend between 70 and 80 percent of the budget and that the AID share of expenditures will amount to between 67 and 80 percent of total expenditures. The estimate would only be improved if CUC cost sharing duplicative efforts were immediately eliminated and staff reductions were effected in 1984.

Other FY 83 budget line items were high in relation to needs and there was $185,000 that was specified as "other" and "contingency." The FY 84 budget has over $355,000 with similar specifications.

Some of the major problems associated with having a comfortable budget include the lack of Fiscal discipline and responsibility. When more than adequate funds are available, the efficiency incentive is not present and when resources become constrained, the ability to cut costs is absent. Management has given serious consideration to several areas wherein operating costs could be reduced with little or no negative effect to the program. These cost cutting areas include the CUC shared cost arrangement, salaries, and a vehicle use policy. The CUC shared cost arrangement is discussed in other areas of this evaluation.

Salaries and wages, while well within the budgetary limits, could be significantly reduced. Liberianization of the faculty and staff could save over $125,000 per year. The question of Liberianization is discussed in section F of this evaluation.

The CUC has an expediter in Monrovia that performs similar functions as the CUC Monrovia office. When this matter was discussed with the staff, we found that RDI's Monrovia functions were previously being handled by CUC but that it had been changed in favor of efficiency. We feel that CUC should handle the Monrovia functions for RDI and that if the RDI Action Committee is set up (discussed later), any significant problems would be resolved.

RDI pays CUC $25,800 per month as cost of shared services. During 1983 it paid $258,000 to CUC, $20,000 more than was shown in the FY 83 budget. All CUC shared cost payments are being submitted to AID for reimbursement. The $25,800 per month payments are continuing in 1984. AID's shared portion of the CUC payments amounts to only $162,300 during FY 84. <u>It is recommended that CUC closely monitor the RDI/AID reporting to insure that only AID budgeted overhead amounts are submitted to AID for reimbursement.</u>

6. RDI Plans to Reduce Operating Costs

Considerable emphasis needs to be placed on short and long-term planning as it relates to resource needs and sources and how to increase the attractiveness of the program for local and foreign support. Significant among the procedures included in this exercise is the planned control of costs. The only documented attempt at identifying cost patterns subsequent to November 30, 1984, was a proposal submitted to the EEC for assistance. The EEC proposal is in the final stages of the approval process and represents an admirable management effort. However, it does not identify total resource needs during the request period, thereby making it virtually impossible to assess the effect of the EEC proposed contribution on the short or long-range plans of the institute.

The RDI revenue receipt pattern over the last couple of years has been somewhat erratic. AID funds were exhausted prematurely in the latter part of 1982. PECUSA provided $140,655 while the Government of Liberia provided another $43,000 to enable the program to continue until AID approved the 21 month extension and AID provided $510,579 in July 1983. There were also receipts generated from tuition and farm sales during the period as well as NEF salary support. As a result of this erratic picture and the month to month uncertainty as to when the next input would be received, cost control was forced on the RDI and the eventual 75 percent of FY 83 budgeted revenues received were more than enough to see the program through the year. Exhibit E shows the FY 83 budget and actual contributions categorized by AID and other donors. Detailed FY 83 and FY 84 budgets categorized by donor is shown in Annex 5.

EXHIBIT E

RDI FY 83 Extension Budget Contributions
March 1, 1983 - December 31, 1983

| | AID | Others | Total |
|---|---|---|---|
| Technical Assistance | $134,000 | $ 50,000 | $ 184,000 |
| Commodities | 68,500 | -- | 68,500 |
| Participant Training | 45,000 | -- | 45,000 |
| Overhead and Sub-Agreements | 40,000 | -- | 40,000 |
| Operating Costs | 596,500 | 128,300 | 724,800 |
| Contingency | 91,000 | 15,500 | 106,500 |
| TOTALS | $975,000 | $193,800 | $1,168,800 |
| Actual Contributions | $701,772 | $186,386 | $ 888,158 |
| Percent Total Receipts | 80% | 20% | 100% |
| Percent Budgeted Share | 71% | 96% | |

As FY 84 started, the program began to breathe a sigh of relief and it appears as though cost control became a thing of the past. As a result, the program approaches the end of the extension period without having identified and documented total resource requirements for the next 3-5 years. As a result of the evaluation team inquiries, the staff and management have started thinking about reducing operating costs, have identified several areas for possible reduction and are currently developing a medium range budget to cover the period of a possible Phase II program. The exercise is expected to be completed shortly.

This is seen as a step in the right direction since it appears that the cost control program may not be as successful in FY 84 as it was in FY 83. As of March 31, 1984, program receipts totaled $585,007 with AID contributing over 94 percent or $552,278 of this amount. With the budget year only 27 percent completed (January 1, 1984 - November 30, 1984) the AID is has contributed over 69 percent of its FY 84 budget share. This is shown in our Exhibit F. Contributions received to date are scheduled to carry the program through May 31, 1984.

EXHIBIT F

RDI FY 84 Extension Budget Contributions
January 1, 1984 - November 30, 1984

| | AID | Others | Total |
|---|---|---|---|
| Technical Assistance | $124,500 | $ 53,000 | $ 177,500 |
| Commodities | 20,200 | 139,000 | 159,200 |
| Participant Training | 40,000 | 7,000 | 47,000 |
| Construction | -- | 106,000 | 106,000 |
| Overhead and Sub-Agreements | 40,000 | -- | 40,000 |
| Operating Costs | 437,300 | 352,500 | 789,800 |
| Contingency | 66,000 | 60,900 | 126,900 |
| Inflation | 72,000 | 70,900 | 142,900 |
| TOTALS | $800,000 | $789,300 | $1,589,300 |

EXHIBIT F continued.....

| | AID | Others | Total |
|---|---|---|---|
| Contributions through March 31, 1984 | $552,278 | $ 32,729* | $ 585,007 |
| Percent of Total Receipts | 94% | 6% | 100% |
| Percent of FY 84 Budgeted Share | 69% | 4% | |

*NEF Budgeted Contributions for FY 84 are $103,000 representing staff salary top-off, support for Farmer Involvement program and in-kind contributions of books, tools and equipment, etc. The RDI is unable to locate an NEF contribution award document, thereby making details of the NEF contribution somewhat sketchy.

The program is spending on the average of 12 percent of its AID budgeted contribution monthly as compared to the pro-rata 9 percent (100% divided by 11 months). Given this current trend, if there are no other inputs from other sources, the AID budgeted allotment will be exhausted by the end of August 1984 ($800,000 divided by 96,568, average monthly expenditures = 8.28). However, with the $273,000 under-spent in FY 83, RDI will just make it through November. One remembers that the program ran out of money prior to the end of Phase I. To prevent a re-occurrence, RDI along with the CUC needs to expend more efforts in securing its budgeted allotments from government, prepare a realistic austerity budget that takes into consideration the current Liberian economic conditions and with the assistance of CUC, reduce costs by eliminating those duplicative efforts discussed in the CUC/RDI shared costs arrangement.

FY 83 expenditures were $845,974 or 27 percent lower than the budgeted $1,168,800. This is shown in Exhibit G. As discussed earlier, forced austerity due to lack of regular inputs left many things undone. Other factors causing the below budgeted expenditures are as follows:

-- Only two of the three NEF personnel were on board for most of the year.

-- The Director was on board only three (3) months in 1983 as compared to the budgeted 10 months.

-- Only 10,000 of 40,000 budgeted sub-agreements were paid in 1983. A lack of documentary support could cause further FY 84 reductions.

EXHIBIT G

RDI Budget versus Actual Expenditures
March 1, 1983 - December 30, 1983

| | Budget | Actual | Difference Over (Under) Dollars | Percent |
|---|---|---|---|---|
| Technical Assistance | $184,000 | $ 57,343 | ($126,657) | (69%) |
| Commodities | 68,500 | 94,450 | 25,950 | 38% |
| Participant Training | 45,000 | 29,121 | (15,879) | (35%) |
| Overhead & Sub-Agreements | 40,000 | 10,450 | (29,550) | (74%) |
| Operating Costs | 724,800 | 637,374 | (87,426) | (12%) |
| Contingency | 106,500 | 17,236 | (89,264) | (84%) |
| Total | $1,168,800 | $845,974 | ($322,826) | 27% |

7. Cost Per Student

The RDI is one of the most expensive educational programs in the Republic of Liberia. The analysis on Exhibit H shows that it is at least 45 percent more than the cost per student at Cuttington University College. Crude similarities can be drawn by CUC and RDI and the University of Liberia (UL) and Liberia Opportunities Industrialization Centers (LOIC). CUC/RDI students combined, almost exclusively, live on campus. Wherein the UL/LOIC have a much higher percent of students who live off campus. (FY 83 per student costs for LOIC was $4,102 as a boarding institution. FY 84 is projected at $2,900 as a non-boarding institution.) Enrollments at UL/LOIC are much higher because room and board is not provided for a significant percentage of the students.

The cost per student for RDI is expected to remain high for some time, especially since over 30 percent of total costs are paid to CUC under the shared cost arrangement. Other factors that would reduce the cost per student include increasing enrollment to the maximum 200 level and reducing costs in those categories mentioned earlier in this report.

EXHIBIT H

RDI Comparative Analysis - Cost Per Student FY 83

| Educational Institution | Cost Per Student |
|---|---|
| University of Liberia* | $1,214 |
| Liberia Opportunities Industrialization Centers** | 4,102 |
| Cuttington University College*** | 4,828 |
| Rural Development Institute**** | 7,001 |
| Kakata Rural Teachers Training Institute* | 1,546 |
| Zorzor Rural Teacher Training Institute* | 2,562 |
| BWI* | 1,628 |

Source

* Liberia Education and Training Sector Assessment December 1983. Ministry of Planning and Economic Affairs: Joint Committee for the Government of Liberia/USAID, Education, Training, and Human Resources Assessment.

** Liberia Opportunities Industrialization Centers. Projected FY 84 Cost Per Student $2,900.

*** Extrapolated from 1982 estimates.

**** 1983 Operating costs divided by enrollment.

8. Evaluation of CUC/RDI Cost-sharing Arrangement

The grant amendment dated June 1983, under Article VI Negotiated Overhead Rate, provides that ..."no overhead rate would be charged under the Agreement" but that "the cost of CUC's administration of the project will be calculated as a portion of the actual costs of the relevant CUC administrative offices (Offices of the President, Dean of Academic Affairs and Student Affairs, and Registrar). That the portion of these costs to be charged to RDI will be determined by the ratio of RDI students to CUC's total enrollment."

The original PVO/OPG grant dated August 20, 1977 and the project amendment dated July 9, 1981 did not include provisions for cost of RDI/CUC shared services as such, but provided for utilities as part of operating costs. An amendment on August 11, 1982 provided for utilities and services provided for by CUC in the amount of $262,000.

The project was extended in June 1983, to include the period through November 30, 1984. The extension is the subject of this evaluation and shared costs were budgeted at $238,000 and $258,000 for FY 83 and FY 84, respectively. During the extension, RDI has paid CUC $25,800 per month as its portion of shared costs.

The nature of the costs to be shared varied between FY 80 and FY 84 as evidenced by various Memorandums of Understanding between the CUC and RDI staffs. It doesn't appear as though AID was ever a party to, or was represented, when the Memoranda of Understanding were signed. Exhibit I shows the nature and cost of items included in the cost sharing arrangement by year. Items included in the "other" category relate to salaries of the campus school teacher, student medical insurance premiums, and gasoline provided by CUC to RDI, which were added in 1981. The grant amendment dated June 1983 defined shared costs to be the Office of the President, Student and Academic Affairs Deans, and the Registrar. It made no mention of the Comptroller's office and the Dean of Administration. It also made no reference to utilities, which indicates that the amendment was not specific as to the nature of shared costs allowed. It is recommended that future agreements between RDI and CUC should state specifically those costs for which RDI will reimburse CUC and, where AID funds are used, the agreement should be approved by AID.

EXHIBIT I

RDI/CUC Cost Sharing Arrangement

| | FY 80 | FY 81 | FY 82 | FY 83 |
|---|---|---|---|---|
| Dining Hall | 61,012 | 106,630 | 80,984 | 95,293 |
| Registrar's Office | 3,234 | 5,424 | 5,093 | 10,603 |
| Dean of Students | 14,868 | 31,447 | 25,777 | 26,858 |
| Maintenance Department | 80,038 | 96,850 | 80,442 | 96,168 |
| Security Services | 2,000 | 6,912 | 4,571 | -- |
| Library Services | 8,000 | 4,300 | 4,499 | -- |
| Other | -- | 23,921 | 20,034 | 4,036 |
| Office of the President | -- | -- | -- | 9,522 |
| Office of Academic Dean | -- | -- | -- | 8,746 |
| Office of Dean of Administration | -- | -- | -- | 4,728 |
| Comptrollers Office | -- | -- | -- | 10,128 |
| TOTALS | 169,152 | 275,484 | 203,450 | 266,082 |

There are several areas included in the cost sharing arrangement in which services are not being provided, or RDI provides its own similar services. Prominent among these areas are the Dean of Students, Registrar's Office, Maintenance Department and the Comptroller's Office. These four areas accounted for over $68,000 during FY 83. Other areas of questionable benefit to RDI are the Office of the President, Academic Dean and Dean of Administration.

a. Dean of Students

RDI students have very little if any contact with the services included under this category. During the evaluation, RDI students mentioned the display of unfriendly attitudes toward them by CUC students in the Dining Hall. As a result, RDI students feel reluctant to utilize the CUC facilities. Many of the female students cook in their room. The dorm area is equipped with recreational facilities. Basketball and football equipment is provided by RDI for its students. Each dorm has a dorm counselor and the Assistant to the Director is on call 24 hours per day to assist students in time of emergencies and does a fair job of insuring that an orderly, decent living area is available for the students. It is recommended that Dean of Students cost category be eliminated from the shared cost arrangement.

b. Registrar's Office

RDI has its own registrar wherein all student records are maintained. The registrar is a full-time salaried position and the incumbent has an agricultural background. Student data and information relative to grades, probation, suspension and etc. are maintained by the registrar. Each student is provided with registration procedures and RDI has its own testing and admissions procedures and requirements. There has been very little, if any, contact between RDI students and the CUC registrar. RDI student financial information is maintained in the business office of RDI. The student handbook is developed and printed by RDI. Student welfare and disciplinary actions are the concerns of the RDI staff. It is recommended that costs associated with the Registrar's Office should be eliminated from the cost sharing arrangement.

c. Maintenance Department

RDI has a very extensive maintenance program with over 60 people, classified as laborers, involved in auto mechanics, carpentry, electrical, maintenance and administration activities. Current CUC maintenance support to RDI includes collection of garbage, which was not being done on a regular basis during the latter part of 1983. Dormitory and associated maintenance costs are being handled by RDI staff. Of the total positions that RDI has in this category, it is estimated that a reduction of 50 percent will not affect the level of services being provided. It is recommended that the maintenance department category be eliminated from the cost sharing arrangmeent.

d. Comptroller's Office

There is little evidence that the Comptroller's office or anyone associated with CUC is monitoring the finance and administration procedures and practices of RDI. The books and records have not been closed out for FY 83, posting of some activities are over a year behind, the organizational chart does not provide for good administrative controls and internal controls are inadequate in a number of major areas. RDI does not have job descriptions for all of its employees, personnel policies and standard operating procedures are inadequate. Representatives of the CUC indicate that all personnel policies and procedures of CUC are applicable to RDI. The CUC personnel policies and procedures are lacking in a number of respects and does not address such areas as vehicle use policy, procurement procedures and etc. There are no monthly financial and administrative reports to CUC nor is there any technical assistance or staff development being provided to RDI finance and administration by the CUC Comptroller's office.

Under the Cooperative Agreement, Article IV.O, it provides that "RDI and CUC will set out in a Letter of Understanding:

— Accounting procedures to be used by RDI that will be compatible with CUC accounts, and

-- Procedures by which RDI will issue checks."

There appears to be no such Letter of Understanding in existence. As mentioned earlier RDI's financial and administrative controls are inadequate to ensure the safekeeping of program resources and the procedures by which they issue checks are not documented. Oftentimes the organization is obligated without the approval of the Director or Deputy Director.

The Business office maintains the financial records of the students. The financial records are lacking in several respects in that each student does not have an individual payment history and file. Individual payment histories should be reviewed and no student should be allowed to graduate unless his fees are paid. This is not currently being done. It is recommended that more attention be directed by CUC towards improving financial and administrative controls at RDI. That a timetable be established wherein the reimbursement of this cost category be dependent on the provision of certain services including the following:

— the proper set-up of the books and accounts to reflect the non-profit nature of the organization;

-- the establishment of an effective monthly reporting and review with monthly feedback from CUC to RDI;

— the establishment of Standard Operating procedures to cover, among other things, procedures for procurement, handling of petty cash, vehicles, gasoline use policy and warehousing management procedures, and

-- development of Personnel policies and procedures be drawn up to suit the needs of RDI.

Further AID assistance to the program should include specifics about the nature and type of staff development that CUC would provide for RDI. We must keep in mind that the shared services arrangement is in lieu of the negotiated overhead rates contained in most cooperative agreements. As such, CUC must demonstrate it's ability to implement and monitor the various provisions of the agreement, especially as it relates to their responsibility to insure that adequate controls exist for the safeguarding of entrusted resources and the project's performance of the stewardship function.

Also of questionable benefit to the program are costs associated with the Office of the President, Academic Dean and Dean of Administration. These elements of the cost sharing arrangement cost RDI $23,000 in 1983 and an estimated $26,000 in 1984. It is agreed that there are necessary administrative costs that must be allocated, using a base that is less than direct in its cause/effect ratio, however, we must keep in mind that the sphere of the CUC President is not limited to students, it includes the entire University family. Students, faculty, trustees, church, civic, foreign and local organizations all claim varying degrees of the President's time.

The current organizational structure of CUC is necessary for CUC, but one questions whether a sub-professional agricultural training program that charges $140 per year per student can, over the long term, absorb an overhead and utility cost factor of $1,481 per student? This does not take into consideration the cost of faculty, other operating costs, training equipment, commodities, etc. If the program were on its own, it would not have a Director as well as a President, a Deputy Director as well as a Dean of Administration and so on. RDI cannot afford this over-organization. It is recommended that consideration be given to establishing per student rates for overhead and general services that do not include fixed costs in the base criteria.

It is further recommended that specific tasks, responsibilities and areas of cost sharing and renumeration therefore be determined prior to the approval of additional support for RDI, and that there be a closer monitoring of the documented compliance of CUC/RDI/AID contractual obligations.

9. RDI/CalPoly Relationship

The RDI/CalPoly relationship envisaged a sister institution format and an agreement to this effect was signed on June 28, 1983 to cover the period of the extension March 1, 1983 - November 30, 1984. The agreement was amended on August 29, 1983 and again in March 1984. CalPoly contracted to perform the following:

— Nominate a director for RDI.

— Train graduates of RDI on a Bachelor's or Master's degree level for the purpose of accelerating staff development.

— Provide long and short-term technical assistance to fill faculty positions, and to advise on curriculum, administrative and financial matters.

A copy of the Sister Institution Linkage Agreement is shown as Annex 6a, 6b and 6c.

The Director has been hired, RDI currently has two people enrolled at CalPoly, and it has just recently completed the design of an outreach program, the "Farmer Involvement Program." To date, there has been no advice requested or provided on administrative and financial matters. The relationship between RDI/CalPoly appears to be proceeding as planned as it relates to educational training and administration.

Of concern, however, is the possible $20,000 increase in the director's salary, as agreed upon by CUC and CalPoly in June 1983, from $50,000 to over $70,000. An increase of $10,000 was made in the August 4, 1983 amendment and the balance of the increase is proposed in the amendment signed by CUC on March 22, 1984. The March 22, 1984 amendment was proposed by CalPoly but is not signed by CalPoly.The annualized salaries increases are shown in the following table:

| Period | Annualized Salary | % Increase Sept. 16, 1983 Base |
|---|---|---|
| Sept. 16, 1983 - Dec. 31, 1983 | $42,120 | |
| Jan. 1, 1984 - June 30, 1984 | 44,568 | 5.8 |
| July 1, 1984 - Nov. 30, 1984 | 48,132 | 14.3 |

The RDI/PECUSA relationship is somewhat confusing since PECUSA ceased all financial support to the RDI after the AID sponsored bridge funding in February 1983. There is little evidence that the RDI/PECUSA relationship has been fruitful for RDI; in fact, evidence exists to the contrary. PECUSA has been used as a liaison between RDI students in the US and RDI. PECUSA has undertaken to provide the students with benefits in excess of the prescribed AID limits. Concern has surfaced because RDI will not honor obligations outside the prescribed AID limits.

FY 83 and FY 84 budgets have provided for $20,000 per year as technical assistance from PECUSA. There has been little or no PECUSA assistance provided to the program other than RDI students/RDI liaison activities. Quarterly billings of $5,000 from PECUSA to RDI have been questioned due to the lack of supporting documentation.

To continue the RDI/PECUSA relationship will produce limited benefits for RDI and could represent a duplication of efforts, since the RDI/Cal Poly relationship is headed in the right direction. It is recommended that consideration be given to the necessity of continuing the RDI/PECUSA relationship.

10. CUC Role as Grantee/Administrator

The CUC has the capacity to become an able grantee/administrator, however, we don't think that it has fully understood its role and its limitations vis-a-vis the project. The previous evaluation recommended more autonomy for the project. This was not meant to induce a hands-off position by CUC. A number of the financial/ administrative/educational problems currently being faced by RDI could be resolved by personnel, resources and contacts currently at the disposal of CUC. RDI deficiencies in staff development, including finance/administration, lack of relevant policies and procedures, excess staff and its inability to develop necessary linkages have been discussed in other sections of this evaluation.

It is recommended that CUC identify an "RDI Action Team", composed of the heads of the various areas included in the cost sharing arrangement, to monitor the institutionalization process and the implementation of the grant provisions. This committee would operate similar to a Board of Directors, receive regular monthly program and financial/administrative reports and provide regular feedback to the RDI. It would participate in arranging for local technical assistance, insuring that the need for off-shore technical assistance is documented and communicated.

Generally speaking, CUC's grantee/administrator role has room for improvement. CUC's expertise is in the administration of a purely academic environment. This CUC asset has caused problems for RDI and the last evaluation recommended the reduction of the number of credit hours in favor of more practicals. The current evaluation has shown how the CUC's superimposing of costs related to an academic environment (President, Deans, etc.) over RDI technical training environment (Director, Deputy Director, etc.) has been a burden to RDI, (expenditures related to cost sharing amounted to 30% of FY 83 totals). We recommend that consideration be given to using a standard bilateral project under Phase II rather than the Cooperative Agreement mechanism to ensure greater AID control and involvement in expenditure of funds.

11. Cooperative Agreement Versus the OPG Mode of Grant Administration in Terms of Smooth Financial Operations.

There is consensus of opinion that the cooperative agreement mode of grant administration is more effective than the OPG mode in terms of financial administration. The OPG mode was characterized by confusion between RDI/PECUSA/CUC and AID/Washington. Problems relating to obtaining approvals, coordination of technical assistance and AID reporting, both in Liberia and in Washington were of major concern. The Cooperative Agreement mode places more responsibility locally with the signatory, CUC and the

local AID Mission. Requests for reimbursement are examined by the local mission, thereby eliminating costly delays associated with the need for additional information, etc., as the local mission is only two to three hours away. Closer monitoring of project work plans by the AID and with respect to CUC/RDI responsibilities are also positive aspects of the cooperative agreement method. However, given the current problems with CUC's administration of the cooperative agreement, the evaluation recommends a standard bilateral project mode of grant administration under Phase II.

## VI. REQUIREMENTS FOR AND THE DESIRABILITY OF ADDITIONAL AID ASSISTANCE TO RDI, PHASE II

### A. Additional Assistance

Compared to similar efforts in other areas of Africa, RDI has made well above average progress in institutionalization, staff development, quality of training and placement of graduates. The results for AID's funding of $5,730,000 for Phase I and the extension justifies a Phase II, both to assist in further development of Liberia's only institution for training extension techniques in technology transfer and to protect the investment to date.

### B. Phase II Requirements

#### 1. Physical Facilities

The existing facilities are in good condition requiring mainly normal vacation period maintenance. Some new physical facilities are required.

#### 2. Staff Housing

There are 8 existing three bedroom houses. The requirements are for smaller units in the future of one and two bedroom size. Rather than construct single detached units it is suggested that one four-plex building of one-bedroom units, one four-plex building of two-bedroom units be constructed.

#### 3. Office Space

RDI currently has two large and two small offices. The two large offices are used, one for the Director and Deputy Director and Student Affairs and one for the Business and Financial office and related affairs. The two small offices are shared by the nine full-time staff. A new administration building is required. This should include office space for the Director, Deputy Director, Administrative/Business support functions, eight staff offices, a common meeting room adequate to seat 200 students, and a library.

4. Classrooms

The four existing classrooms are inadequate for scheduling the number of courses offered and creates constant scheduling programs. Construction of the administrative building will free these offices for use as classrooms.

5. Library and Books

The current library sharing arrangement with CUC has been of limited benefit to RDI students, since CUC's library is not arranged or stocked for an agriculture program. In addition to constructing the library in the administration building, appropriate reading, reference and research books and materials should be procured. An educational institution can be no stronger than its library and student access to pertinent information. It is imperative that the library be established at RDI. This facility and books should not be added to CUC's library. The existing small library/reading room should be converted and used as laboratory space, for the student books and supplies sales room, and/or for the reproduction room and storage space.

The students do not have personal textbooks, and many of them find it difficult to rent books for all the classes. Therefore, it is suggested that adequate books for student textbook purposes be included in the library stocks, or be otherwise available to be rented or purchased by the students. It will be imperative that funds for this purpose be budgeted annually for replacement both of the library volumes and the textbooks.

6. Vehicles

The team recommends three vehicles be procured. The campus is small enough that vehicles are not required for the staff to get around other than the farm manager. The farm manager has required full-time use of a vehicle, but with the transfer of the CUC farm back to CUC, full-time use of a vehicle for the farm manager can no longer be justified.

One vehicle should be procured for the administration, under the direct control of the Director, to be used <u>only for official purposes</u> as the Director approves. One vehicle, a pickup, should be procured to support the skills training program and skills training sites farm manager for hauling materials to the fields, animal feed, supplies and materials, etc., and should be under control of the Director.

An almost total lack of off-campus visits by classes was blamed on transportation problems. With the Farmer Involvement Program and practical application training in villages near the campus being implemented, a 30-40 passenger school bus should be procured. These vehicles <u>must not</u> be at the disposal of the staff for personal use.

7. Dormitories

The six existing dormitories are adequate for RDI's student body which is not expected nor should it be permitted to expand beyond 200. RDI must have first priority occupation of the dormitory space, with CUC student occupation on an excess space available basis only

8. Other Commodities

Unfortunately, the Phase I project proposal established the physical plant, but virtually ignored other very important needs of training institutions, such as classroom, laboratory and practical skills training, tools, materials and supplies; business/administrative office machines and equipment; reproduction/duplication equipment appropriate to the task; tools and equipment for the general services/maintenance function; and sports and recreation equipment and supplies for the student body. The list of commodity items will require special attention when the PP is designed to assure the commodities provided are not duplicated by other donors assistance.

Assuming USAID approves Phase II, RDI should be requested to prepare commodities lists prior to arrival of the design team to save time and effort. This would most appropriately be done with the faculty/staff of each function preparing the list for that function. (Animal sciences, plant sciences, business office, practical skills). The list for each function should be kept separate and identifiable for its respective function. During the project paper design the lists could be scrutinized and finalized with estimated costs.

9. Technical Assistance

(See section F, Institutional Development and Institutionalization, RDI's Staff Development Plan and Liberianization Schedule for Liberian Counterpart Training.)

a. Director - 4 years

The Liberian Co-director should be identified and appointed by the beginning of Phase II. After one year on the job he/she should be programmed for one academic year of training in the U.S. Upon return to RDI, responsibility for administrative responsibilities should be increasingly turned over to the Liberian Director with the American advising/guiding only as required. By the end of project, the Liberian Director should be in full command, responsible for all administration functions.

b. One Rural Technology Specialist - 4 years

An individual with a farm mechanics/shop background should be recruited. The program should focus on rural appropriate technology not tractor/electrical/irrigation engineering level instruction.

The AID funded specialist should follow the procedure outlined for the director above upon return to RDI of the two RDI participants/rural technology instructors.

c. Animal Science - 2 years

The responsibility for the program should be increasingly transferred to a Liberian instructor to assure that he/she is carrying full responsibility by the end of two years. If the participants have not completed B.Sc. training by the end of two years an extension of the AID funded technical services may be required.

d. Institutional Administrative Management Organization Specialist - 1 year

This individual is required to systematize the administrative, management, business, personnel, student, etc. functions and give on-job-training to the respective staff in proper implementation and conducting these functions.

He would also be responsible for establishing a control conscious atmosphere at the RDI. Particular emphasis will be put on establishing and documenting a management information system that integrates all programatic and financial activities.