

|  |  |  |
|--|--|--|
| 1. PROJECT TITLE<br><br>Rural Development Training at<br>Cuttington University | 2. PROJECT NUMBER<br>669-0153  | 3. MISSION/AID/W OFFICE<br>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)<br><br>Final Evaluation<br><input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION |  |

|   |  |   |                              |                     |                                 |             |
|---|--|---|------------------------------|---------------------|---------------------------------|-------------|
| 5. KEY PROJECT IMPLEMENTATION DATES           |  |   | 6. ESTIMATED PROJECT FUNDING |                     | 7. PERIOD COVERED BY EVALUATION |             |
| A. First PRO-AG or Equivalent<br>FY <u>77</u> | B. Final Obligation Expected<br>FY <u>83</u> | C. Final Input Delivery<br>FY <u>83</u> | A. Total                     | \$ <u>4,939,000</u> | From (month/yr.)                | <u>8/77</u> |
|   |  |   | B. U.S.                      | \$ <u>3,905,000</u> | To (month/yr.)                  | <u>2/83</u> |
|   |  |   |                              |                     | 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 *  |
|--|---|---|
| 1. Approve a Phase II.   | USAID/Liberia                             | AID/W   |
| 2. Make appropriate implementation/contract arrangements with the institutions involved.   | AID/W                                     |   |
| 3. Retain the same project purpose for Phase II.   | USAID/Liberia                             |   |
| 4. Reorganize the RDI curriculum.  | RDI                                       |   |
| 5. Reduce student workload to 15 credit hours.   | RDI                                       |   |
| 6. Cease offering majors in specific disciplines.  | RDI                                       |   |
| 7. Award a diploma of agriculture rather than an associate of agriculture degree.  | RDI                                       |   |
| 8. Do not undertake a curriculum expansion.  | RDI                                       |   |
| 9. Completely Liberianize RDI by end of Phase II.  | RDI                                       |   |
| 10. Establish linkages and ongoing dialog with potential employers.  | RDI                                       |   |
| 11. Set up an RDI advisory committee composed of potential employers.  | RDI, USAID, CUC                           |   |
| 12. Recruit older, work-experienced students from rural areas rather than younger students from urban areas.   | RDI                                       |   |
| 13. Number of students admitted should be based on employer needs and the state of the economy.  | RDI                                       |   |
| 14. Transfer management of the CUC production farm from RDI back to CUC.   | RDI, CUC, USAID                           | * Since the has expired the recommen tions are bi in nature, r dates have l |
| 15. Make RDI administrative functions and decision-making autonomous from CUC.   | RDI, CUC, USAID                           |   |
| 16. Develop a formula and system for charging shared services between CUC and RDI.   | RDI, CUC                                  |   |
| 17. Conduct an external audit of the OPG grant.  | AID/W                                     |   |

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

|  |  |  |
|--|--|--|
| <input type="checkbox"/> Project Paper     | <input type="checkbox"/> Implementation Plan e.g., CPI Network | <input type="checkbox"/> Other (Specify) |
| <input type="checkbox"/> Financial Plan    | <input type="checkbox"/> PIO/T                                 | _____                                    |
| <input type="checkbox"/> Logical Framework | <input type="checkbox"/> PIO/C                                 | <input type="checkbox"/> Other (Specify) |
| <input type="checkbox"/> Project Agreement | <input type="checkbox"/> PIO/P                                 | _____                                    |

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT assigned.

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 (Name and Title)

Olean Hess

12. Mission/AID/W Office Director Approval

Signature: *Lois Richards* (Act.)

Type Name: Lois Richards, Director

Date: May 9 1983

XD-AAN-092-A

6690153/17

ISN-31335

Evaluation of Project 669-0153  
Operational Program Grant - Protestant Episcopal Church  
OPG AID/afr-G-1352  
Rural Development Training at Cuttington University

USAID to Liberia

Monrovia, Liberia  
November 15, 1988

ii

## OUTLINE FOR THE RDI/OPG EVALUATION

- I. Executive Summary
- II. Recommendations
- III. Introduction and Background
  - A - Description of Project
  - B - Purpose of Evaluation
  - C - Methodology
  - D - Scope of Work
- IV. The Evaluation
  - A - viability of RDI
    - 1. Potential for RDI Becoming Financially Self-Sustaining
    - 2. Use and Effect of CUC Resources on RDI Financial Independence
    - 3. RDI Administration
  - B - Definition of Sub-professional/middle Level Human Resources
  - C - RDI Graduates, Employment and Role
  - D - RDI Linkages with Potential Employers of Graduates
  - E - Student Recruitment and Selection from School Versus Work Environment
  - F - Curriculum Quality and Relevance, and Modifications Past and Future

- G - PEC/PVO Support and Backstopping/Future Role
- H - Recruiting and Retaining Quality Liberian Staff
- I - Physical Facilities Requirements - USAID/Other Donors
- J - Technical Assistance and Training Requirements
- K - Future Sub-professional/Middle Level Human Resources Requirements

## Acronyms

- AID - U.S. Agency for International Development  
Washington Office
- CUC - Cuttington University College
- EEC - European Economic Community
- FAO - Food and Agriculture Organization of the  
United Nations
- GOL - Government of Liberia
- MOA - Ministry of Agriculture, Liberia
- NEF - Near East Foundation
- OPG - Operational Program Grant
- PEC - Protestant Episcopal Church in New York City
- RDI - Rural Development Institute Developed Under  
the Project
- USAID - United States Agency for International  
Development/Liberia



## I. Executive Summary

1. 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 sub-professional/middle level, in both the public and private sectors. This shortage constrains the government's attempts to provide development services to the rural population. It also constrains agricultural production and rural development due to the limited transfer of technology to the rural population.

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

The project is establishing a post-secondary, two-year terminal 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 technology encompasses animal and plant production and health, and related

soils management and engineering tasks. The objective is to develop skill proficient, sub-professional personnel, and train them in technology transfer techniques, generally for agriculture extension type programs.

3. 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, broadcast sowing unimproved cereal grains and other food crops on poorly prepared seedbeds, with cultivation and other production practices to match; animal management in which if the animal doesn't manage to be completely self-supporting it doesn't survive.

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

The big gap in the agriculture field force technology transfer chain is the middle level, sub-professional functioning between the B.Sc. level, professional, administrative and the village level direct farmer contact personnel. The planners believed that by filling this middle gap with personnel capable of training and supervising the village level personnel, and acting as the intermediary, more technology/skills would be introduced

to the rural population with greatly improved chances of transfer.

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

N/A.

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

There have only been two graduating classes to date on which follow-up data is expected this year. This data is important and should be available prior to Phase II design for making judgments about employee/ graduates ability, employment opportunities, the value and quality of RDI training and for projecting future RDI efforts.

7. 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 trained individuals. The training program is modified as needs/changes for improvement are identified.

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

Only indirectly.

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

The graduates are employed primarily in the Agriculture Extension and related field services, and as such are the vehicles for general technology transfer. However, this normal channel of movement will be affected for the duration of the GOL being freeze.

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

None. It trains personnel to work as part of the national agriculture delivery services.

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

The initial beneficiary, the students, a great deal; two years of training, paper qualifications, and great expectations of a job. The secondary beneficiary, the farmer, it's too early to measure.

Additional Comments:

Considering the extent of planning analysis, detail and from signed agreements by all parties that AID/Washington normally demands of project proposals (PP) of any funding level it is astounding that this OPG PP was approved and funded for \$2.9 million in AID/W. The Protestant Episcopal Church (PEC) and the GOL, according to the PP face sheet and narrative were to contribute \$630,000 and \$337,000 respectively. Unfortunately, due to misunderstandings, unverified assumptions and lack of signed agreements, the actual contributions were \$177,050 and \$297,000 respectively. When funds were required for implementation PEC stated its contribution was to be in-kind, not in cash. The GOL said general discussions were held but a dollar figure was neither discussed nor agreed upon. In addition no signed agreements were prepared specifying the roles or actions the various parties were to play.

The OPG was to establish a new two-year institution from the ground up, but several extremely important aspects were glossed over or ignored. A small library and reading room were constructed, but no books or other publications were procured. 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. Inadequate planning and funds for participants has resulted in a large short-fall of trained, qualified Liberian staff to assume operation of the institute. 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 seem to be based on estimates rather than accurate, separate accounts maintained on each facility, utility and service. CUC staff occupied an RDI staff house, while RDI rented housing off campus. CUC students are occupying one of RDI's dormitories, requiring crowding of RDI students in the dormitories they occupy. It is the conclusion of the evaluator that CUC has benefited as much or more from RDI's facilities and cost sharing as RDI has benefited from CUC. A comprehensive audit is recommended of the OPG and project.

RDI was to attain technical and financial self-sufficiency by Phase I termination. This was not accomplished due to the factors discussed above.

Phase II is required in order for RDI to achieve self-sufficiency and to protect a substantial investment to date. These requirements are:

- 1 - Physical facilities, ten, one and two bedroom staff houses; a faculty office block of eight units; two class rooms, a general meeting/assembly hall, and a library;
- 2 - Library and text books, the quantity and subjects to be determined during Phase II design.
- 3 - Laboratory and class room instructional equipment, materials and supplies, the specific items to be identified during Phase II design.
- 4 - Vehicles, one car, one pickup and one bus.
- 5 - Other commodities, business/administrative offices machines and equipment; reproduction/duplication equipment; general services tools and equipment; and sports and recreational equipment and supplies.

## II. Recommendations

It is recommended that:

- A. The Rural Development Training Project, Phase II be approved contingent upon the stipulations and conditions in the balance of the recommendations being satisfied.
- B. Appropriate project implementation/contract arrangements be made between USAID, GOL, CUC and the Liberian Episcopal Church Diocese.
- C. The project purpose during Phase II remain the same as the purpose for Phase I, "to develop at RDI a two-year, terminal, skills oriented agriculture training program," and that monitoring by MOA and USAID assure adherence to the purpose.
- D. The current academic/curriculum organization of four departments, plant sciences, animal sciences, soil science and agriculture engineering each offering an academic major be reorganized. The broad subject areas/disciplines and the emphasis placed on each should be reflected in the order of priority and the importance of each subject area to the national development goals and the small farmer, and therefore, the institute's curriculum offering.

The new curriculum should give first and major emphasis to plant sciences, second and lessor emphasis to animal sciences and third and least emphasis to soil science and agriculture engineering. The latter two subject areas' curriculum offerings should be pared down and simplified, closely coordinated to and integrated with, and offered as basic support courses to plant and animal sciences.

- E. That the student load be reduced to 15 credit hours per term to allow a more rational division of time and energy between lecture and skills training in the field. This will require reducing the number of courses offered, and the specificity and sophistication of the academic/courses that are offered.
- F. The practice of offering a major in a discipline as now being done, should cease. Stating a student has completed a major in a discipline infers a depth of academic and skills training experience and competence in a discipline graduates of a two year institute of this nature do not have. The term "major" should be down graded to "some emphasis", if such reference is necessary.
- G. RDI award graduates a diploma of agriculture rather than an associate of agriculture degree. Actions are needed to reverse the current trend of the institute, and the overwhelming attitude of the

students of the program being academic college/university level and that credits should be transferable for degrees. Actions are needed to reverse the impression being made on the trainees that they are college students, with all the negative effects this is having on their conception of their roles. The students are being trained for a field position, with eventually some supervisory responsibility. The expectations and attitudes evolving are for a desk with a secretary and a telephone.

- H. The proposed areas of curriculum and program expansion contained in the draft Phase II proposal not be implemented. RDI must restrict its program and curriculum offering to a scope it can cope with and focus its efforts energy on the project purpose as stated in recommendation C and the curriculum in recommendations D, E, F and G.
- I. During Phase II increased efforts be expended to recruit and/or train enough local staff to ensure complete Liberianization of all positions by the end of Year 4. The estimated requirements are eight degree programs and two one-year non-degree programs. It may be determined during Phase II design that short-term third country training is needed.

- J. RDI establish effective linkages and on-going dialog with the MOA and other major potential employers of the graduates. This should be done through appropriate staff member visits to the project sites, newsletters, establishing an advisory/steering for RDI consisting of representatives from these potential employers programs and other appropriate measures. The objectives should be to: learn what the employers want in a training program for future employees; keep them informed on RDI's program; and gain their confidence in the program adequate to increase demand for RDI graduates.
- K. The MOA and its parastatals play a very active role in planning and reviewing the curriculum, monitoring and evaluating the training program, determining student body size, and selecting and sponsoring students for training. Preferably the large majority of the students at least for the immediate future, should be employees of the GOL. The MOA and the parastatals for the foreseeable future will be the largest employer of RDI type trained human resources. Eventually if the parastatals are shifted to private enterprise and other private enterprise ventures increase, the placement of graduates will shift accordingly.

MOA parastatal interest and participation in and support for the RDI program are essential to its success. Training graduates to satisfy the MOA/ parastatal human resource requirements in turn requires their participation in developing the curriculum, monitoring conducting of the training, and selecting students. The majority of the students for some time should come from among MOA employees and therefore should be selected by the MOA.

- L. Student recruitment and selection should be reversed from the trend to younger, less experienced students from urban background and high schools, and return to the initial practice of older, work experienced students from rural areas and high schools.
- M. The annual student intake at RDI be based on the projected needs of the future employers, and the state of the economy, not on the 200 student capacity of RDI. The state of the economy and the GOL freeze on salaries and new hire seriously affects graduate placement. So long as these conditions continue placement will remain a problem, and frustrated, unemployed graduates with high expectations of employment, but no jobs, will create problems. Admitting students from employers

who have a position to return to upon graduation will alleviate the frustration and problems. The GOL, therefore, should help project the number of trainees needed annually from which to determine the annual intake of students.

- N. The responsibility for operation and management of the CUC production farm/enterprises must be transferred from RDI back to CUC, and RDI must be completely divorced from the production function. Any action or condition of agreement required to assure that this transfer has been completed must be taken prior to approval of Phase II. The animal and plant enterprises retained by RDI must be no larger in number or area than is necessary for training purposes.
- O. The administrative function and decision making for RDI be in fact autonomous from CUC. It makes little sense for RDI to: have a Director and Deputy Director whose decisions and actions must be cleared through CUC administration; whose expenditure and checks must be cleared through and countersigned by CUC administration; and for RDI to be a department of CUC.
- P. All charges for shared services between CUC and RDI be based on accurate cost account records kept separate for each service, that RDI payments be only

and exactly for that portion of the total number of students that RDI students compose; and that any intermingling of funds be strictly avoided.

- Q. An external audit be conducted of the OPG grant and Rural Development Training Project as soon as possible now that Phase I is terminating.

### III. Introduction and Background

#### A. Description of Project

In August 1977 an Operational Program Grant (OPG) of \$2.9 million was awarded by AID to the Protestant Episcopal Church (PEC) USA, to establish a sub-professional/middle level skills oriented agricultural training institute in Liberia. The Rural Development Institute (RDI) was established on land owned by and under administrative supervision of Cuttington University College (CUC). RDI was established for the purpose of developing an in-country training capacity for sub-professional agricultural workers to help subsistence farmers improve their production and cash incomes. The program is a two year agriculture technology course for high school graduates, preferably who come from subsistence farming areas. It consists of classroom instruction, laboratory work and field experience. The training emphasizes hands-on skills training supported by appropriate academic/class room instruction specifically tailored to address the technical, limited resources and socio-economic circumstances of subsistence farmers. The course subjects and practical skills training include production of animals, tree crops, fruit, cereals and vegetables and on cooperatives, soils and agriculture

engineering, with some agriculture economics and rural sociology. The goal is to develop an agriculture field force of sub-professionals with training, skills and competence to extend knowledge and technology to Liberia's poor, illiterate, small farmers whose resources are limited, and whose farming practice are antiquated.

Facilities were constructed, staff hired locally and/or expatriates were recruited, and the curriculum developed. During the five year Phase I program the curriculum expanded from general courses in plant and animal sciences to four departments, plant science, animal science, soil science and agriculture engineering, each offering a major. The school can accommodate 200 students and graduate up to 90 students per year. Of the first two graduating classes, 1980 and 1981, there were 61 and 64 graduates respectively of which about 90 percent were placed. The whereabouts of the remaining 10 percent is unknown. The 1982 graduating class is expected to have between 90 and 95 graduates.

B. Purpose of The Evaluation

The purpose was to review and measure the progress to date against project targets, determine the need and justification for Phase II program, and if appropriate, make recommendations for future support and the areas of concentration.

C. Methodology

This was an outside, independent, final evaluation of Phase I of the RDI project. The evaluation was conducted in collaboration with the GOL, CUC, RDI and USAID. It focused on reviewing progress to date; identifying and determining the need and justification for a Phase II; and if appropriate, making recommendations for future support and the areas of concentration.

The evaluation was conducted under a Non-Personal Services Contract by Oleen Hess, a consultant and retired former Agriculture Development Officer with AID.

The original OPG proposal, a Phase II draft proposal, the Grant Agreement, memorandums of understanding and relevant reports and files were reviewed. Questionnaires were prepared for interviewing students, faculty and staff at RDI. CUC administration, RDI graduates and their employers/supervisors, and appropriate GOL officers were interviewed. The housing,

classrooms, offices, laboratories, dormitories, library, workshops and farm were inspected at RDI. The data thus gathered was again reviewed with RDI staff and faculty prior to return to Monrovia to prepare the evaluation.

D. Scope of Work

Tasks: The Constructor will:

1. Assess whether the PVO and RDI have met the targets of the OPG.
  - a. Analyse the viability of the Institute: How it can be made more self-sustaining; how can Cuttington University resources be better employed to ensure greater financial independence? Is RDI effectively administered? What improvements can be made?
  - b. Arrive at an acceptable working definition of what constitutes "middle level manpower" in the agriculture/rural development sector.
  - c. Briefly describe what has happened to RDI graduates, including a comparison of their roles in the public and private sectors with specific focus on income variations between these two sectors, if applicable. Can one draw implications for the future?
  - d. Determine what linkages exist between RDI on the following projects: Liberia Agricultural Corporation (LAC), Partnership for Productivity

(PFP), Firestone, Bong County Agricultural Development Project (BCADP), Lofa County Agricultural Development Project (LCADP), Nimba County Agricultural Development Project (NCADP) and major special crop production projects such as Decoris, Butaw, etc. on the other. Also what linkages exist between RDI and the Ministry of Agriculture. Recommend ways to strengthen linkages.

- e. Address the issue of student recruitment (out of school versus out of working environments) with the view of placement of these students upon graduation.
- f. Evaluate the relevance and quality of the RDI curriculum as it has evolved over 1979-1982.
- g. Assess the level and quality of support and coordination (backstopping) received from the Protestant Episcopal Church, in terms of measuring the PVO's capability for future support of this nature.
- h. How successful has RDI been in recruiting and retaining good quality Liberian staff? How can this function be improved?
- i. Make recommendations on possible USAID support:
  - a. Evaluate the physical facilities and determine

what improvements or new facilities are likely to be needed over the 3 - 4 years.

- b. Changes, if needed, in the RDI curriculum.
- c. The level and kinds of technical assistance and training required to assist RDI in achieving its objective over the next three years.
- d. Determine to the extent possible, future mid-level manpower needs (types, numbers, sub-sectors, geographical concentrations) in the Liberian agriculture sector for: the immediate future (0 - 5 years), the medium term (6 - 10 years), the longer term (beyond 10 years). Further, determine what types of female mid-level technicians and managers are likely to be required and identify the functional areas in which they would be most needed. How should RDI plan for these needs?

## 2. Reports

The Contractor will deliver to USAID/Liberia the evaluation report(s) described above in final form before departure from Liberia. This will specifically include an Executive Summary as outlined in State 191170 dated July 10, 1982.

IV. The Evaluation

A. Viability of RDI

1. Potential for RDI Becoming Financially Self-Sustaining

Currently RDI is not financially self-sustaining. The project proposal does not specifically address the question of RDI attaining financial viability. This is unusual in an institutional development project. The proposal contains a financial plan detailing the resource requirements and source of funds during the five year life of project, but does not follow on to identify continuing sources of funds to attain financial self-sufficiency. The following statement from the project proposal glosses over this crucial objective. "Inputs provided to RDI through this grant will phase down over the final years of the five-year program. At the end of the project period, CUC will assume full and continuing support for RDI with the cooperation of GOL and other Cuttington supporters thus at the end of this project RDI will be a fully institutionalized training facility of CUC producing seventy-five new agricultural workers per year."

The mid-term evaluation dated March 1981 states "AID should provide emergency funding to carry RDI through the 1981 school year and then phase out AID assistance over the next two years . . . the PEC will take over from AID a greater share of recurrent costs

in 1982 and 1983 and then be fully responsible for RDI operations in 1984. This will require that RDI receive greater GOL assistance, increased tuition and fees, expanded PEC support, and other donor assistance." Since PEC has been unable or unwilling to contribute the \$632,050 scheduled in the project proposal it is imperative that future PEC involvement and support be specified and agreements signed regarding what it can or will do relative to RDI self-sufficiency at project phase out time, assuming Phase II implementation.

It is the opinion of the evaluator that the project design projected an unrealistically short period for an institution of this nature to achieve technical viability, and to become financially self-sufficient. This becomes more acute in view of Liberia's economic circumstances and projections of internal resources to support RDI. It is expected that GOL revenues can be made available to RDI, but this will require a vast increase of effort by RDI to improve linkages with GOL and other potential employers of the graduates, plus an active public relations program to make a wider audience aware of RDI's program. The project design was also seriously lacking in planning for and funding training to develop human resources requirements

for RDI. Corrective actions are required should Phase II be implemented.

The evaluator is optimistic that, assuming approval of Phase II for five years and implementation of the following actions, RDI should become financially and technically self-sufficient by 1988.

It is imperative that the GOL, primarily the Ministry of Agriculture (MOA), and the agricultural and rural development parastatals, play a much larger role at RDI. This should include advising on, planning and developing the curriculum and monitoring the training program, and selecting and sponsoring students. Such involvement would greatly enhance the support for RDI and placement of the graduates. This will require a greater effort by RDI to establish linkages with the potential employers of the graduates and assure meaningful on-going dialog. These agencies will support RDI and employ its graduates only if they feel the graduates can and will perform technically and attain as well in the positions opened to them.

The MOA is currently employing about 200 high school graduates. They would benefit from RDI's training. This would in turn improve the technical competence and capacity of MOA to provide the services to speed up agricultural and rural development, and

increase small farm production and income. Furthermore, the current economic conditions largely place a freeze on public sector new hire, and tends to preclude the self-sponsored graduates from this major avenue of employment. The uncertainty of placement of graduates would decrease since they would return to their positions in the public sector. It is suggested that the ratio be not less than 80 percent public sector sponsored and not more than 20 percent private sector or otherwise sponsored. Since these personnel would be employees on leave for training, they would return to their positions and would not be new hire.

The MOA and number of parastatals are currently conducting in-service training programs for their own staff. 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 purpose resulting in increased efficiency and effectiveness. The funds being expended on in-service training by the MOA and its parastatals could be allotted to RDI who, given the support and resources could satisfy all of Liberia's requirements for agricultural sub-professional and much of its in-service training.

This again will require a vast increase in linkages and communication between RDI and these potential employers, regards the type and content of training of both the graduates and in-service trainees.

One method of improving the linkages would be through an advisory/steering committee composed of representatives of the future employers of graduates and utilizers of the in-service training. Additional liaison with these agencies will be required to: assure their employee training needs were addressed; conduct follow-up evaluations of graduate performance; and strengthen rapport between the institutions. Training program modifications could then be made based on the existing needs and circumstances as identified jointly between RDI, the employer and the graduates.

PEC/CUC is committed to continue in-kind and shared support services such as water, electricity, dining hall and library, and general supplies and materials procurement. CUC administration reports that currently CUC has a \$550,000 endowment invested in the U.S., obtained through PEC. At a recent PEC conference in the U.S. CUC administration was requested to prepare a proposal to PEC to increase the endowment to \$3.0 million, which PEC would attempt to raise through pledges, etc. CUC administration views any future income from the endowment as support for both institutions.

RDI's future plans project increased tuition charges. Present annual tuition is \$140 covering instructional board and room costs. The projected increases are \$60 in December 1982 and \$50 annually thereafter until December 1987. Using the 1981/82 tuition revenue from 180 students of \$25,200 as the base the increased revenues will be as follows, assuming RDI student capacity of 200 is achieved.

| <u>Year</u> | <u>Annual Revenue</u> | <u>Gross Increase Over 1981/82</u> |
|-------------|-----------------------|------------------------------------|
| 1981/82     | 25,200                |                                    |
| 1982/83     | 40,000                | 14,800                             |
| 1983/84     | 50,000                | 24,800                             |
| 1984/85     | 60,000                | 34,800                             |
| 1985/86     | 70,000                | 44,800                             |
| 1986/87     | 80,000                | 54,800                             |
| 1987/88     | 90,000                | 64,800                             |

By the end of Phase II, assuming approval, with staff training and capital and other development costs largely completed, the annual budget requirements are expected to drastically decrease. During succeeding years the operating costs are expected to remain in line with revenues generated from various sources primarily tuition, PEC, and GOL.

2. Use and Effect of CUC Resources on RDI  
Financial Independence.

A crucial objective and end of project condition of any institutional development program is the institute's ultimate capacity to become both technically/academically and financially self-sufficient after a reasonable period of support. RDI was initiated 1977 with a 5 year OPG of \$2.9 million from AID to the PEC. The PEC and the GOL, according to the project proposal face sheet, were to contribute \$630,000 and \$337,000 respectively. Unfortunately, due to misunderstandings and unverified assumptions and lack of signed agreement, the actual contributions were \$177,050 and \$297,000 respectively. Other sources of revenue included \$59,500 from the Near East Foundation and \$56,910 mostly from tuition. AID subsequently increased its contribution by \$300,000 and \$705,000. This provided RDI with \$4,495,460 in revenues for the Phase I five year period averaging \$899,992 per year.

During Phase I implementation, as funds were requested from the major contributors, PEC stated the understanding was that its contribution was to be in-kind, not in cash. The GOL stated that the PEC representative held general discussions about the project but a dollar figure was neither discussed nor agreed upon. The project proposal does not

contain a project agreement, or any other written agreement, specifying the cash and/or in-kind contributions and roles the major contributors other than AID are to play. This plus the rather loose nature of the overall project proposal indicates more careful scrutiny of such grant proposals might be in order prior to approval.

Another problem on the horizon is revenues to operate the RDI from November 30, 1982 until Phase II is approved and funding released. The target date for Phase II approval is early March 1983. A recent audit and case flow analyses concluded that all RDI funds would be expended as of November 30, 1982. AID/Washington notified USAID that the \$705,000 supplemental allotment for Phase I was the last funds available for Phase I. RDI administration is unable to identify any other source of funds to bridge the gap. Since it is not possible to place an institution in a state of dormancy RDI will be forced to close down all operations until Phase II funds/support are available. This will result in a scattering and possibly loss of staff and students.

Other actions have resulted in a drain on RDI's resources, revenues and training functions. It is not uncommon in developing nations to saddle training and research institutions with the added responsibility

of production, a responsibility that invariably results in uneconomic production and seriously detracts from the primary mandate of research and training.

The CUC owns 1200 acres of land for farming purposes and had developed 350 acres of rubber, 35 acres of citrus, 30 acres of oil palm, 50 acres of swamp rice, 25 acres for wet and dry season vegetable production, areas for upland rice and cassave, 60 acres of fenced pasture for cattle production with 27 head of cattle, plus swine and poultry enterprises. The enterprises had operated at a loss throughout the time CUC had managed them. The production farm was transferred to RDI with the assumption that RDI could improve production and benefit from the profits, while using the farm for training the students in the respective skills.

The anticipated profits have not materialized and in fact over the five year, Phase I period a \$70,000 deficit has been made up out of RDI rather than CUC funds. The evaluator wonders if in fact the actual deficit has not been higher.

Other factors also entered the picture. The GOL pricing policy allowed marketing dressed poultry at

\$2.25 per pound. CUC administration ruled that RDI would sell poultry at \$1.75 per pound. CUC then obtained poultry for the dining hall to feed both the CUC and RDI students, thus subsidizing student meals. However, CUC did not share in the cost of the subsidy. Additionally, poultry in excess to the dining hall requirements had to be sold to local merchants for \$1.75 per pound who benefited from the \$.50 per pound profit, rather than RDI. Similar action was taken on pork produced by the swine unit.

The CUC caterpillar, crawler tractor was transferred to RDI with the production farm. RDI expended \$20,000 repairing the tractor which was used almost exclusively developing and improving CUC's farm. RDI used it to dig two small fish ponds. At minimum this should have been shared cost. RDI paid the full cost.

In addition to the financial drain on RDI's budget the time, energy and effort expended on production watered down the time, energy and effort that should have been expended on training. If RDI is to become a viable institute, financially or technically, it is imperative that the CUC production farm and enterprises be transferred from RDI responsibility, and that RDI be completely divorced from the production effort.

The project design stated that CUC resources and facilities would be available to support RDI. However, the net effect appears to be that CUC has benefited as much or more from RDI as RDI has benefited from CUC. The shared dining hall required enlargement and improvement. RDI administrative, design and supervisory time and funds were used for this purpose. The cost of materials were then shared and deducted from RDI's subsequent payments to CUC for shared use. However, no allowance was made for the administrative, design and supervision time expended by RDI. Conversely CUC's comparable administrative, etc., time expended on shared services is charged against RDI revenues.

The CUC library is available to RDI on a student body percentage basis computed against the total cost of operation. Since CUC does not offer agriculture its library resources offer limited benefits to RDI. A cursory review indicates that the costs are greater than the benefits to RDI.

A CUC staff member occupied one of RDI's houses for three years. At the same time RDI was renting houses off campus for its staff. After prolonged negotiations CUC agreed to pay RDI \$3,000 annual rent. Currently CUC students are occupying one of RDI's dormitories. This requires that RDI crowd three

students into rooms designed for two students. Negotiations have been under way for some time on payment. CUC proposes to pay RDI \$75 per year per student, a very favorable arrangement for CUC.

The initial arrangement was that CUC administration would provide grounds, building and vehicle maintenance to RDI. RDI subsequently decided that to have services when and as required it must establish its own general services department and staff. RDI no longer pays CUC for shared maintenance services but does now carry an unplanned responsibility. Complaints were made that CUC regularly uses the RDI bus, but does not share in the costs.

Since the initial concept was that CUC resources could assist, RDI the question arises how can CUC resources be better employed to ensure greater RDI financial independence? Since CUC is about as short of resources as RDI there appears to be limited potential for improvement. In actual fact CUC has relied on and used RDI's resources as much or more as RDI has used CUC resources, other than the dining hall and health unit, water and electricity. There was some feeling at RDI that RDI could operate its own dining hall at less cost per student than is the case with shared facilities. Confirmation of this,

however, will require a cost analysis, for which accurate cost records would have to be kept, separate and identifiable from other budget items at CUC.

RDI is duplicating one service CUC should be able to offer more effectively and economically. Student records are kept by the CUC registrar's office. RDI has a registrar's office also. If RDI feels the need to keep student records these could be duplicated at CUC and require only a filing clerk at RDI, rather than a registrar function.

Overall the evaluator concludes there is very little potential for greater use of CUC resources to lighten RDI's financial problems. And that a comprehensive audit and cost/use analysis would likely determine that the opposite is true.

### 3. RDI Administration

The first RDI director was a senior representative from PEC who was involved in conceptualizing the program and writing the project proposal, and then as director for three years. He accomplished a yeoman feat in locating and procuring materials, supervising construction and getting the physical plant ready for occupancy. Although not particularly the role of the director, it would not likely have been accomplished within a reasonable period otherwise, and was therefore essentially necessary. He appeared to

make assumptions which subsequently were viewed as fact without the benefit of firm agreement of and commitment from the second parties. His actual experience in institutional and administrative development regards academic curriculum and practicals, staffing and services, the mechanics of institutional administration, apparently was also limited.

The second RDI director, due to budget problems, was forced to spend an inordinate amount of time off campus obtaining revenues for day to day operations, primarily from the GOL. Although necessary, under the circumstances at the time, this seriously detracted from his time and energies to deal with design, development and implementation of RDI, on-campus, day to day administration. Three way conflict between CUC administration, the staff, and the director regarding the curriculum, method, approach and emphasis placed on the various disciplines and related problems had their affect on the quality of administrative development and progress. The second director departed post after two years.

Administration was then placed in the hands of the Deputy Director in July 1982 as acting director who has had limited experience.

The result has been five years of institutional operations with directors who had limited experiences

as administrators, particularly with formal institutional development in developing nations. Future development of RDI will be largely in direct proportion to the quality of the administration, requiring that a dynamic experienced director with an agriculture education and/or rural development background be recruited for RDI.

B. Definition of Sub-Professional/Middle Level Human Resources

The definition will be purposely broad and general in nature. It would be difficult to develop a specific, detailed definition as one standard does not exist. Each employing agency will view its requirements differently according to its specific needs. RDI might develop more specific definitions after consultations with the potential future employers of its graduates based on the function and circumstances of the various enterprises.

The sub-professional/middle level technically trained personnel are normally graduates of a technical school, or other two year institute at post-secondary, but less than B.Sc. degree level. The sub-professional agriculturist would have completed a general agriculture training program and gained a good fundamental knowledge of agriculture and rural development and agriculture production. The institutional training should consist of and be equally

divided between academic and practical skills training with the academic focused on providing an understanding of, and be closely correlated with the practical skills training.

Middle level connotes a position between senior level technical and/or administrative personnel, and the lower level hands-on worker or farmer.

In most conventional, professionalized services the sub-professional personnel are included and required to perform such middle level roles as training, supervision, technical 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 follow and 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. After serving an internship and demonstrating competence in the employing agency's/firm's respective skills and tasks they could normally expect assignment to middle level positions, and be given some discretion and freedom of action under the supervision of senior professionals.

C. RDI Graduate Status

RDI is a two year institution and enrolled the first class in 1979. The following table shows the total male and female intake and the number of graduates.

|      | Student Intake |        |       | Graduate       |        |       |
|------|----------------|--------|-------|----------------|--------|-------|
|      | Male           | Female | Total | Male           | Female | Total |
| 1979 | 80             | 4      | 84    |                |        |       |
| 1980 | 78             | 11     | 89    | 58             | 3      | 61    |
| 1981 | 85             | 23     | 108   | 57             | 6      | 63    |
| 1982 | 77             | 9      | 86    | (estimated) 77 | 13     | 90    |
| 1983 |                |        |       | (estimated) 64 | 8      | 72    |

All but 8 percent of the first graduating class of 1980 are known to be employed. They are employed as follows: one-fourth by the MOA, one-fourth by parastatals, one-fourth by private corporations or commodity concessions, six remained at RDI as teaching assistant, five returned to high school teaching, and the employment status of 5 is unknown. Of the second graduating class of 1981 50 or 81 percent are known to be employed and one is deceased. The location and employment status of the other 12 or 19 percent is unknown, but some are expected to have found employment. Two of the latter twelve graduates are female.

The 1981 graduates are employed as follows: two remained at RDI as teaching/technical assistants; one is deceased; two are enrolled in the University of

Liberia; four are in private enterprise and self-employed; sixteen each are employed by the MOA and parastatals; and 11 each returned to teach in high schools, and the rest are unemployed or status unknown.

Time and distances did not permit visits to the various employer locations and interviews with more than a few graduates and their supervisors. The general impression is that the graduates have fully embraced the terms "Associate of Agriculture Degree and Middle Management" and expect to be assigned immediately as officers in management/supervisory positions. Few employers are prepared to accept that position immediately.

The evaluation of the graduates by employers/supervisors varied from one who thought their practical field skills and experience were lacking, and that they should be assigned as extension aides, to one who thought "they could hang the moon", or were very well trained. The general impression was that the graduates receive good academic knowledge but need more well planned, specific skills training and field work experience. Of course the employer should realize that few training programs can meet all the detailed needs and be prepared to provide specific skills and other training, peculiar to the enterprise concerned.

Time and distance precluded personal visits and interviews with a sample of graduates regards their roles and salary differentiation. Information from graduate's visited and RDI staff was that positions/ roles were about the same in the public and private sectors. Information on salaries was not available.

D. Linkages With Potential Employers and Graduates

Linkages worthy of note do not exist between RDI and the MOA, parastatals, and private enterprise. Contacts with GOL are primarily for the purpose of obtaining funds for RDI's budget. The initial curriculum designed at RDI was passed to the MOA for review and comments. Since then curriculum revisions have been made unilaterally. Contacts for the purpose of establishing proper linkage with the Bong County Agriculture Development program, only 5 miles from the campus, are seriously lacking.

Meaningful, professional and personal linkages with all the potential employers of RDI's graduates are essential to RDI's success. Students will continue coming to RDI only if the institution demonstrates that the majority of the graduates find employment. The more informed they are about RDI's program, and infact the more the potential employers of the graduates feel their particular skills needs in future

employees are being met the more apt they will be to fill positions with RDI graduates.

Efforts to establish linkages should be initiated immediately and could consist of a number of actions- news letters; staff follow-up visits with employed graduates at their work place, and visits with the graduates' supervisor; field days at the campus; and forming an advisory committee composed of representative from the employers group.

A periodic news letter to all potential employing agencies/firms would be an excellent way to both begin the linkage and keep them informed about the RDI program, whats happening, whats planned, the general training program, and to solicit suggestions and comments.

RDI senior staff should then, after arranging appointments with the appropriate agencies' staffs, make visits to the agencies. These visits can serve several purposes: (1) student follow-up for the graduates' evaluation of their training relative to preparation for the job and responsibility; (2) discussions with the graduates' supervisors for evaluation of the individual and the training relative to performance on the job; (3) soliciting the supervisors suggestions for modifying the curriculum in line with the skills, competence and performance requirements

of the agency. Review and analysis of the combined comments of the employing agencies will provide guidelines for future training actions.

A widely publicized, well planned and carried out field day just prior to graduation would be useful for all participants. The graduating class could meet and greet the visitors, conduct tours and answer questions. With proper pre-planning and dialog the agencies could hold personal interviews with the graduating class during the field day.

An advisory committee composed of representatives of the employing agencies, assuming attendance and participation, would strengthen linkages. The meetings must be well planned with meaningful agendas which the committee receives along with a reminder at least one week prior to the meeting. The meetings must be conducted in a brisk, business-like manner, last no longer than is absolutely necessary, and be viewed by committee members as contributing to improving RDI's program and their future employees. The committee members will be very busy individuals and highly unlikely to participate in meetings that are called just because the date has arrived for the next meeting.

The Ministry of Agriculture will very likely be the largest employer of RDI graduates and should play a much larger role in the program. The GOL, primarily the MOA, will be required to increase annual budget funding to RDI on a continuing basis if the institution is to continue functioning. Being the largest employer of graduates, and the largest contributor to the budget, implies an active continuing participatory role in RDI. Linkages and good rapport are particularly important between MOA/RDI.

MOA should play an active role in the planning, monitoring and evaluation of the curriculum and training program and in student selection. An annual RDI program review should be conducted jointly between RDI, MOA and other interested parties. Careful compilation and analysis of graduate follow-up and employer evaluations will provide the data for curriculum modifications, if necessary, to match the training to the trained human resources requirements. And student selection should be based on the individuals capacity and potential to complete the training program and contribute to the development effort, not on seniority. Seniority should be a criteria only when the individual with the seniority is also the individual with the capacity and potential.

The MOA employees about 800 high school graduates, a rather large pool of potential trainees. The RDI and MOA should establish very close linkage to assure integration and coordination of efforts and full cooperation on recruitment and selection of students. The training program conducted and the student selection should be based on identified human resource requirements to meet development goals.

Another aspect that needs exploring is the somewhat fragmented and individual agency in-service training programs. Proper linkages with and confidence of these programs may well result in a consolidation of in-service training. Assuming RDI received the resources and support currently expended on this variety of in-service training, RDI could develop and provide for most of the in-service training needs at net savings of funds and staff time.

A combination of these actions should be instrumental in establishing these all important linkages. There may be other and better techniques for doing so. The important thing is that the linkages be established, continuing dialog become standard procedure, and the training program and trained manpower needs be very closely coordinated.

E. Student Recruitment and Selection From School Versus Work Environment

The issue of recruitment of students directly out of school environment with limited if any work experience, and students out of a work environment with several years experience, and the influence these respective environments have on graduate placement is at least partially a function of several factors.

The current GOL budgetary reduction and freeze is stirring concern among this year's (1982) graduating class about finding employment. This is particularly true with those students entering directly into RDI from high school with limited work experience, and no position to return to. This concern over placement is shared by RDI administration and staff. Should there be an upswing in the economy this problem will decrease. It currently is cause for concern where the major source of employment is Government programs. At this time, however, placement seems more influenced by the economy than the age and work experience of the graduates.

With only two graduating classes there is limited experience from which to draw implications. The third class graduates in November 1982. The first two graduating classes are 90 percent employed. At least some of the remaining 10 percent are probably employed but their where-about and employment status are unknown. According to the RDI administration and staff

these students were older and generally returned to formerly held positions.

The 1982 graduating class is younger, having a higher percentage from a school, rather than a work environment, with no former position to return to. These students are concerned and anxious about finding jobs after graduation. The results will not be in until November/December 1982, and, therefore, definite conclusions cannot be drawn at this time.

It is recommended for Phase II, that most, if not all RDI students, be selected from the MOA and its parastatals personnel. These personnel will benefit as much from training as anyone else would. Furthermore, this would minimize the problem of pumping into the economy people trained for employment and frustrated and agitating because there aren't any jobs.

Originally RDI aimed at recruiting older work experienced rural students who generally performed better, were more satisfied with the skills oriented training, and less insistent about further academic studies. This began to change in 1981/82 with larger members of younger students enrolling from urban backgrounds and high schools. This may be partly due to the increase in tuition from \$32 the first year to \$140 the third year which the urban parents/students

could very like more easily afford. By 1987 the annual increases will raise tuition to \$450. A potential problem may arise, that of the rural students being unable to pay the tuition and the student body would then be largely younger, inexperienced urban high school graduates. However, GOL sponsorship of its employees would resolve the problem.

The staff and administration generally expressed the concensus that a high school diploma and a competitive paper examination are not necessarily the best selection criteria. Students scoring lower on the examination may and often do have other attributes, skills and attitudes more applicable/usable during and after training. It was also the general concensus, except with one staff member, that students recruited from the rural areas, who are graduates of rural high schools, showed greater initiative in practical skills training, and displayed a better attitude toward the total training program.

All 14 students interviewed, and according to the staff the general attitude of the student body, is one of pressure to permit transfer of credit for university degrees. This was more prevalent among the recent high school graduates, the younger students with limited work experience, than among the older students

being sponsored by their employers. The evaluator left RDI with the impression that by innuendo and other indirect and possibly subconscious actions the students may be encouraged in this matter. Mention has been made in some non-student quarters of upgrading RDI to a four year faculty of agriculture of CUC. This would be a mistake, and USAID should repeat to all concerned in very positive, explicit terms the mission will not support Phase II on any conditions other than RDI being a two year terminal, skills oriented agriculture training program.

F. RDI Curriculum Quality and Relevance and Modification, Past and Future

The RDI curriculum in 1979 encompassed plant sciences and animal sciences of a general introductory nature. The program/curriculum has evolved by adding considerable specialization within the plant and animal sciences sections, and by adding two new sections, soil science and agriculture engineering.

As an example, the general course in tree crops expanded to add plant propagation, rubber culture and pest disease. Animal sciences expanded from a general course to specialized courses for each type of animal. Animal sciences and plant sciences were then made departments offering majors. Subsequently soil sciences and agriculture engineering were added to the

curriculum and expanded into departments offering majors. The next step was to offer an Associate of Agriculture degree rather than a Diploma of Agriculture. Each step, whether consciously designed to do so or not, has in reality moved the program more in line with academic college level work, with emphasis more to academic than practical skills training.

The staff at RDI disclaim that changes were intended to achieve college academic levels. However, one wonders how a two year program requiring 18 credit hours per term, along with laboratories, can leave much student time and energy for top rate practical skills training.

There is also a definite need to improve the relationship between lectures and the practicals. This will require better planning and tighter scheduling of the total program between the lecturer and the technical/teaching assistants (TA). It is essential that: the student be able to link the practical skills training back to the lectures and laboratory exercises; that the skills training be viewed by the students as more than busy work, chopping weeds; and that the skills instructor (TA) accompany the students, not send them to the work site. This will also require that the lecturer periodically visit the field

activities to determine if the practicals' program is remaining attuned to the academic program.

The RDI program was envisioned as emphasizing practical skills training backed up by enough academic work to assure a good understanding of the principles and reasons for the new technology and practices. There was also to be enough separation of activities between CUC and RDI to "prevent the impression being made on RDI students that they are college students with all the negative effects that would have on their conception of their roles"

There are contradictions between the original purpose of the project and institute, and the direction it has taken during Phase I. Each of the major curriculum changes made have moved the program farther from its original purpose in practice and concept.

It is difficult for the evaluator to rationalize a two year terminal training institute of this nature established to emphasize practical skills training yet offering academic majors in four areas requiring students to carry 18 credit hours per term in order to graduate, and then offering an Associate of Agriculture degree.

Divorcing RDI from all operations and responsibility for the CUC production farm was discussed previously. RDI need retain only small areas, if any, of the tree crops, certainly not more than an acre or two each of the rubber, citrus and oil palm enterprises. Large areas are unnecessary for training purposes. RDI should retain a maximum of six brood sows and a boar in the swine unit for training purposes. The same is true with the poultry enterprise. One poultry house each for laying hens, and for brooding and rearing broilers is adequate. A maximum of six breeding females and a male each of goats and sheep are adequate. RDI must estimate in each annual budget the funds required for feeding and maintenance of the animals, and then reserve and expend the funds for that purpose only.

The students should be required to keep records on the individual enterprises to gain experience on this essential aspect of plant and animal production. This would also assure that the students had a much better grasp of enterprise management and production, and enable them more effectively and appropriately to evaluate the individual enterprises.

The production farm includes about 35 head of cattle. The evaluator suggested that four of them be selected

and trained to work, and then used for plowing and cultivation of the food crops training enterprises. If this is not done the total herd should be transferred back to CUC. They would still be available for training purposes. Several objectives were raised relative to training and working oxen, "no one knew how to train and work animals; farmers generally do not have cattle; the farm implements are not available" etc. Regardless of the reasons given it is the appropriate level of technology.

The purpose of the animal and crop enterprises are training, and for obvious reasons must not be larger than needed for that purpose. They should never be considered as the source of supply for the dining hall. The production from the enterprises can be sold to the dining hall, but the area and volume produced from each food crop or animal enterprise must be based on training requirements, not dining hall demands or faculty food requirements.

A sub-professional/technical training institute such as RDI should not view itself as a junior college/university program offering a wide variety of courses of academic level appropriate for transfer to, or for a university degree. This was not the purpose or objective under Phase I. It is strongly recommended that approval of Phase II be contingent upon complete

understanding and agreement that the original purpose and objective be adhered to.

RDI staff all concurred in discussions that RDI should be developed as a sub-professional training institution, focusing on developing graduates competent in technology and skills performance relevant to Liberia's agricultural and rural development needs. However, curriculum changes and additions, and actions taken during Phase I appear to be in contrast to the original purpose and objective. Despite the verbal consensus one got the impression that it would be both appropriate and desirable in the view of some of the staff for RDI to develop into a faculty of agriculture.

It would be more appropriate for RDI to offer a Diploma in Agriculture rather than an Associate of Agriculture Degree, considering the purpose of the institute and the training it should offer. Every student interviewed by the evaluator, and the overwhelming attitude of the student body, was that the credits received from RDI should be transferable to a university and applied toward a B.Sc. degree. It is unlikely this attitude would be so pervasive without some encouragement to graduates.

RDI, in attempting to include too broad a curriculum offering, is diluting the quality of the training. How realistic is it to expect students to carry 18 credit hours per term in addition to 3 hours daily of field practicals and skills. This would be an extremely heavy load, if all the students were at the honors level, and were also physical Atlas. The result is generally more a matter of introduction to a wide array of subjects than competent performance in and command of subject matter and the more important skills and technology. In addition, discussions/negotiations are under way with the European Economic Community (EEC) and the Food and Agriculture Organization (FAO) for assistance to further broaden the curriculum.

The suggestion was made on more than one occasion to add a semester to the program to better accommodate the curriculum. A more logical solution is to reduce the curriculum offering to meet Liberia's priority needs relative to the role of the sub-professionals in the development effort; the scope with which the institution can and should attempt to cope; in line with the institution's and the GOL's capacity to assure RDI becomes financially and technically self-sufficient by project termination; and to achieve the project purpose.

The curriculum offering should be modified with the major emphasis on plant sciences/production. The tree crops instruction should place emphasis on the individual tree crops in accordance with that respective crops importance and priority in the national development program. Food crops and vegetables instruction should be organized in the same manner.

The animal sciences curriculum should be modified and given less emphasis in the program than plant sciences. The major emphasis should be given to small animals: swine, poultry, goats and sheep. Efforts are underway to obtain rabbits, ducks and meat type pigeons. Rabbit production efforts in the tropics and particularly in Africa, have been generally unsuccessful. For this reason the proposed rabbit enterprise should be dropped along with the pigeons. The ducks will fit well with the fish pond and should be developed.

The scope of the agriculture engineering program should be reduced from a department and offered only as a support program to the plant and animal sciences. The curriculum offering should focus on appropriate levels of technology in line with the graduates future employment roles, rather than expansion into broader areas and skills. Since the farmers and other rural

population with whom the graduates will work have no machinery there is little justification for training in machinery maintenance and repairs. The training should focus on hand tools and equipment, small village water development and utilization, sanitation and hygiene at the appropriate technology level determined by surveys and base line data from the rural areas. The instruction in agriculture buildings and post harvest technology should deal with simple structures constructed of locally available materials, that the small farmers have access to and are within their resources limitations.

Likewise the soil science curriculum should be reduced and offered only as a supplement to the animal and plant sciences program. Considerable time is spent on soil surveys and mapping. Since their roles as sub-professional technical personnel are unlikely to include these responsibilities there is little justification for the time and effort spent. A simple introduction adequate to understand the principles of and reasons for surveys and maps should be adequate. The National Soils Research and Survey Units should be equal to the tasks where needed.

Similarly, considerable time is spent on soil chemistry, fertility, taxonomy and testing. Since the graduate's roles in the field are unlikely to

include such specific skills there is little justification for the training. These are tasks for the National Research and Soils Testing Laboratories. A basic knowledge and ability to identify soil types and characteristics are more in line with the trainee's needs. This should include management, manipulation and conservation of the various soil types, and their compatibility with various crops and farming systems. The need is for basic practical skills more directly relevant to the small farmers constraints, and technology the farmer can cope with. A few laboratory and field personnel are needed for the Central Agricultural Research Institute, but this requirement does not justify the current Soils Science Department at RDI. The future role of the graduates and the national demand for the sub-professional, skills oriented level and type of training does not at this time justify a soil science program of this sophistication at RDI.

As stated, the curriculum was expanded from training in plant and animal sciences to include soil sciences and agriculture engineering offering a major in each of the four areas. Offering a major and achieving the attendant competence specialization this implies in a two year sub-professional institution does not auger well for the reputation of the institution. It appears more logical to offer a

Diploma with some academic discipline specialization, rather than an Associate of Agriculture degree with an academic major. No small amount of planning, curriculum coordination, and time is required to appropriately accomplish competence in a major discipline in a four year program. The employers of the RDI graduates do not view them as competent majors in a discipline, and this in the final analysis, is the evaluation of the institute's program and end product, the graduate.

The extremely heavy load the students now carry leaves no course time in the current curriculum design for the 4 months of hands-on, internship, off-campus work experience proposed in both Phase I and in the Phase II proposal. This is also an important part of skills oriented training.

If in fact RDI is to attain the project purpose, the current academic curriculum offering must be reduced, the coordination and integration between lectures and practicals improved, and the 4 month internship and village extension practicals added. The student course load absolutely cannot be increased. Only, in fact, if the course load is reduced, will the school day allow the students the time and energy to improve the skills training.

The draft Phase II project proposal states:

New Phase II Project Purpose

"The proposed five year Phase II extension project will remain firmly anchored in the agricultural training sector, with a continuing bias toward food self-sufficiency for small scale subsistence farmers. At the same time the curriculum and objectives will be expanded to incorporate more of the substantive content and coverage required to represent a broader definition of agriculture and rural development. Included in the selective areas of growth will be training concerned with cooperatives, their roles in production, supplies, credit consumption and marketing; the development and expansion of small animal production at the farm and village level; the role of women in agriculture and rural development; and the role of development and planned change; the agent in the Liberian agrarian revolution; and the incorporation of a four month off-campus field internship for students in the semester just before graduation."

The principal objectives of the Phase II proposal will be as follows:

1. To train a cadre of young Liberian men and women to work in agricultural development, particularly at the middle management level.

2. To focus the basic agricultural training on areas of Plant Science, Animal Science, Soil Science, Pest and Disease Control, Farm Management, Agricultural Engineering, Communications, and Extension Knowledge and Skills in Technology Transfer.
3. To introduce cooperative training as a necessary component for agricultural and rural development. Included will be emphasis on principles, processes, practices and legal economic and cultural activities. Emphasis will be given to the important types of cooperative functions such as the producers coops, the supply and credit coop, the consumer coop and the marketing coop.
4. The roles that rural women perform in agriculture and development are well recognized. The mystery of how to delineate, articulate, legitimize, train for and enhance these roles is the intent of this new component.
5. A predominant percent of the Liberian nation's population is engaged in agricultural and other extractive industries. The traditional tribal settlement patterns, widely dispersed in relatively inaccessible places, make development and communication difficult at best. One new strategy to be employed is to join cooperatively with the national rural radio communications project. It

is proposed that the faculty and instructional resources of the Rural Development Institute be utilized to collaborate in the production of much of the technical content for dissemination to rural farm families, village leaders, women and youth. RDI students, exposed to these communication materials, will be far more likely to employ them and support them.

A four month field internship will be introduced for the RDI students in the semester just before they graduate. This experience will bring the trainees closer to the realities of field employment conditions. At the same time the faculty who will arrange for and monitor the internship experience will be in a position to link the classroom instruction to the practical conditions of the field.

No mention is made of reducing or modifying the current program, only of adding disciplines in Rural Sociology, Family Household Economics and Nutrition, Women in Development, Rural Radio and related skills in technology transfer, and Cooperatives. These new subject areas cannot be added without comparable reductions in the current program, and still retain the RDI objective and project purpose. It is repeated

again, all discussions and oral expressions with individuals concerned with RDI are that the purpose remains the same as developed for Phase I. However, all actions and proposals are in the opposite direction!

The semester of field internship is essential and should be incorporated in the current program by cutting back on existing requirements. Unfortunately, the Phase II proposal is to add only, not to adjust or cut back. If the four month internship is just added to the current curriculum, the program becomes five semesters. The new disciplines, and the multiplicity of courses they will generate, will require a minimum of two additional semesters totaling seven. Being that close to a four year program will generate extreme pressure for one more semester and a four year curriculum, and then a faculty of agriculture at CUC. A hard decision is required on RDI's future. Is RDI to be, as originally envisioned, or have a continually expanded curriculum and semester load, and eventually become a four year program offering a degree?

G. PEC/FVO Support and Backstopping and Future Role

PEC like most PVOs has few if any financial resources beyond those contributed by interested parties. The uncertainty, and ebb and flow of contributions make it somewhat difficult for a PVO to project revenues year to year with much certainty. There in lies part of the problem of support. PEC also has limited home office staff making it difficult to provide the level of backstopping required by a project of this nature.

PEC itself answers the question of its future role with the project in its memorandum to USAID, et al., from Bruce W. Woodcock, dated August 8, 1982. "Phase II Proposal Abstract".

"In order to ensure an effective transfer of the oversight responsibilities of the Rural Development Institute from the Episcopal Church to the Liberians at Cuttington University College and the RDI staff, and the Government of Liberia; a cooperative agreement is being sought between USAID/Liberia and CUC for a five year period, Phase II, beginning December 1, 1982 through September 30, 1987 . . . PEC, after relinquishing its PVO project status, will seek to continue to assist RDI as a sub-contractor with some purchasing, recruiting and fund raising activities in the United States."

It is suggested that USAID concur in PEC decision to transfer oversight of and any direct responsibility for Phase II project. Purchasing, except for rather small items or lots will require adherence to AID procurement regulations, and would very likely be more appropriately handled by procurement centers familiar with the requirements. Possible PEC role in recruiting staff will depend on the method of implementation provided for in the project design. The extent of support expected or required from PEC for project implementation, other than fund raising, should be kept at a minimum.

#### H. Recruitment and Retention of Liberian Staff

RDI has a total of ten full time and five part time senior faculty members. Of these fifteen instructional staff, three of the full time staff are Americans and seven are Liberians. Of the part time staff one is Indian and four are Liberians. One full time Liberian staff member has a Masters degree. The other six have B.Sc. degrees. The four part time Liberian staff have one Ph.D, two Masters and one B.Sc. degree. Only one Liberian staff member has resigned, a rather good record for retaining staff.

Considering both the supply and the demand for trained/qualified human resources in Liberia, RDI has done a good job of recruitment and retention.

Additional faculty is required, but the number and disciplines should be determined after decisions are made on the scope and areas of concentration of the curriculum.

One problem raised by every student and faculty member interviewed and in nearly every discussion was part-time lectures. The student consensus was that the part-time instructors were generally not as well prepared as the full time instructors; they frequently came to class late, or not at all; they gave their lecture and hurried off; were never available on campus for discussions or guidance; most lectures are held from 7:30 - 9:00 PM when the students are tired or need to study; and RDI should have only full time instructors.

The faculty expressed most of the same problems with part time faculty. In addition, the general consensus was that the full time instructors had to carry the short fall tasks that were left undone, and that the part time instructors were paid extremely well for the time and effort expended.

The students generally felt the TAs were conscientious and did the best they could, but, at times were unsure of themselves. They suggested that the senior faculty

should spend more time with the TAs planning, scheduling and coordinating the lectures with the practical skills training, and training the TAs thoroughly in the skills and tasks for which they were responsible.

Assuming Phase II approval every effort must be exerted to recruit and/or train personnel and fill all staff, faculty and supporting personnel positions with qualified Liberians. This should be completed by year four to assure an orderly phase out of USAID support and assumption of all functions by Liberians.

I. Physical Facilities Requirements - USAID/Other Donors

The existing physical facilities are in good repair requiring only the normal vacation period maintenance. New physical facilities are required however as follows:

Staff Housing - Ten New Units:

Four staff houses are now being rented off campus and five part time instructors are to be replaced with full time staff living on campus. The eight technical/teaching assistants currently receive a housing allowance and live off campus.

Two of the eight existing 3 bedroom houses are currently vacant, one of which had been occupied by a CUC staff member. 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 on four-plex building of one-bedroom units, one four-plex building of two-bedroom units and one du-plex building of two-bedroom units be constructed providing six, two-bedroom units and four, one-bedroom units.

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. An office block of eight units large enough to accommodate two faculty members each are required.

Class Rooms:

The four existing classrooms are inadequate for scheduling the number of courses offered and creates constant scheduling program. One of the four rooms was constructed double the size of the other three to be used for large classes, tests and general meeting room. It is totally inadequate for this purpose.

A block containing four new units is required. Consisting of two units of standard size class rooms, one units appropriate for a library, and one unit

large enough to accommodate 200 students. This latter unit is needed for larger student and total student body meetings, recreation, and similar purposes. It would also be appropriate for the in-service training programs that RDI should arrange for and be offering for MOA and parastatal employees mainly, but not necessarily only, during vacation periods.

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, appropriate reading, reference and research books and materials should be procured. A training 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 text books, and many of them may find it difficult to rent books

for all the classes. Therefore, it is suggested that adequate books for student text book 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 text books.

Garages and Vehicles:

Two transport and garage buildings and six vehicles were requested. The evaluator recommends the number of vehicles be reduced to three. The campus is small enough that vehicles are not required for the staff to get around for official purposes. The farm manager has required full time use of a vehicle, but with the transfer of the production farm/enterprises 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 for each official purposes and trips as the Director approves. One vehicle, a pickup, should be procured to support the skills training program, hauling materials to the fields, animal feed, supplies and material, etc., and should be under control of an appropriate staff member identified by the Director.

An almost total lack of off-campus visits by classes was blamed on transportation problems. If the recommendation for expanding extension training to practical application training in villages near the campus is implemented a 30-40 passenger school bus should be procured. Otherwise the bus should not be procured.

#### Dormitories

Two additional dormitories were requested. These should not be constructed. The six existing dormitories are for RDI's student body which is not expected nor should it be permitted to expand beyond 200. RDI should not be expected to provide dormitory space for CUC students.

#### Water and Electric Power:

There was considerable comment about RDI establishing its own water and electric power supply. This should not be supported by USAID. The cost of installation and operation would be far greater than the current sharing arrangement with CUC. However, a two day review of the dining hall charges to RDI resulted in considerable savings. Rather than being based on a percentage of the actual cost, the estimated budget figure was being used. The problem was to identify the dining hall expenses within the overall CUC budget and accounts. RDI should insist on and ascertain that

that accurate, separate accounts are maintained on each shared service to avoid paying more than its fair share for the services.

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.

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.

IV - J Technical Assistance and Training Requirements:

The amount of technical assistance and training required will depend on the final decision on the scope and direction of the curriculum. Assuming the recommendations are followed to reduce the amount and specificity of the academic areas; tighten up the total instructional program; reduce the student credit hour load; offer areas of emphasis rather than majors; and restrict soils science and agriculture engineering to simpler more basic support areas; the training requirements will be considerably less than if the program continues on the current expansion course. The training requirements proposed are based on a reduced curriculum.

1-B.Sc. in Soil Science - Emphasis should be on identifying soil types and characteristics, management, utilization and conservation. The instruction should focus on proper soil manipulation to maintain fertility; improved moisture retention; improved conservation of the soil resources; and soil type and characteristics compatibility with different crops.

1-B.Sc. in Agriculture Engineering - Emphasis should be<sup>2</sup> on farm shop, and basic water management and buildings. The instruction should focus on appropriate technology relevant to Liberia's rural conditions, rather than tractors and equipment, survey and mapping. The students must be trained to work with the farmers relative to their circumstances and constraints today, not where they might be in 25 years.

1-B.Sc. in Extension - This faculty member should be available from the pool of trained human resources in Liberia. If local recruitment is possible and the individual lacks rural sociology training an M.S. in rural sociology should be programmed, This would permit one staff member to combine extension and rural sociology in training students how to approach and work with the rural population. Otherwise a B.Sc. in Extension with a heavy minor in rural sociology should be programmed.

This does not require, and should not be extended to earning a doctorate. The training should focus on the usual functions of administration such as budgets, curriculum development, staff recruitment, personnel management and student discipline.

1. Participant in Home Extension (Family house hold economics and nutrition)

This program definitely should not be the standard US or European Home Economics approach. The top female RDI MOA Home Extension agent should be selected and sent to Ghana and enrolled in the final year of the Home Extension diploma program followed by six or more months on-the-job training in the Ministry of Agriculture Home Extension Unit under Director Elizabeth Netti. The program focuses on hands-on experience with: very simple basic nutrition, utilizing foods produced by the household and introducing new vegetables etc., into the garden where needed; very simple home improvements for better hygiene and sanitation; labor saving devices, etc. It is the best rural women's development program the evaluator observed in 25 years with AID.

1-B.Sc. in Agriculture economics/farm management has been requested. But it is unclear as to exactly what role this discipline would play at RDI. One full time faculty member is teaching for management. It is suggested that rather than add another staff member that the existing lecturer be programmed for a M.S. degree in farm management. Two Agriculture economics lecturers are not required at RDI.

2-B.Sc. in Agronomy/Plant Science - It is assumed the farm manager will be transferred from RDI with the production farm leaving no plant sciences full time faculty member. The deputy director is teaching plant science currently and it is expected that he will continue doing so as required.

1-B.Sc. in Animal Science, husbandry production.

1-B.Sc. In Animal Science/health

One year training in institutional administration and management. This training will prepare the deputy director for the role of director he is expected to assume during the Phase II.

Technical Assistance:

The phase II proposal projects nine expatriate staff and one administrator/director. Three of the staff are to be provided by the Near East Foundation, with a portion of the costs borne by RDI. These are one each agriculture Engineer, Soil Science and Agriculture Economics. It is assumed that USAID will provide the funds for the RDI costs.

It is also projected that a full time Extension and a full time Rural Sociologist be provided. The justification and rationale for a full time Rural Sociologist in a two year terminal training institute is not apparent to the evaluator. One full time staff with a B.Sc. in Extension and a heavy minor in Rural Sociology will be adequate for the needs in both areas. The proposals and actions seen aimed at expanding the curriculum offering, rather than tightening it up to reasonable levels suited to the objectives of the program.

Suggestions were made to add one more semester to the program. The FAO and EEC proposals as currently being negotiated will expand the program rather than support tightening up and doing a better training job in accordance with the original project objectives, unless both agencies agree to provide assistance to the proposed reduced program. The proposed expansion will only add

to an already acute problem RDI faces in becoming financially and technically viable. It is imperative that the total program be very carefully scrutinized and kept within the parameters of a well planned and taught two year terminal program that the GOL and other limited external resources can afford to continue at project termination.

It is recommended that the proposed Family and Household Economics/Nutrition expatriate staff member not be recruited. This position and program would be more appropriately filled and implemented by the returned participant proposed above. It is recommended that the Women in Development Program not be added to the program. It will be done better and in an action program by the position above. It is also recommended that the cooperatives program and staff not be added to the program

The technical assistance requirements proposed for USAID funding are:

1. One Director who has had overseas experience in institutional development. The experience should have been with institutions of the RDI type, not in the broader sense of institutional development;

2. One animal production instructor with overseas experience in animal production, and who has had teaching experience.
3. The Near East Foundation will provide three faculty presumably with some USAID support.
4. Considering the number of Liberians trained in Extension under USAID sponsorship, it does not seem justified for USAID to fund a technical assistance position in Extension. Local recruitment should be possible. However, if local recruitment is not possible the technical should be provided.

K - Future Sub-professional/Middle Level Human Resources Requirements

The data for making the immediate, short-term and long term trained middle level human resources requirements is not available. Time allowed for the evaluation does not permit collecting reliable data.

Discussions at the MOA indicate that the projected requirements in the OPG proposal are still valid. The MOA and the MPEA estimated that there was an immediate need of 1 317 agriculture assistants of RDI level and a sustained long range requirement for about 200 per year. The MOA stated it could absorb 60 diploma graduates per year into its agriculture system alone.

A definitive human resources requirements projection is needed to provide guidance relative to a wide range of training requirements in the future.

In the meantime it is evident that all the RDI graduates can be absorbed into the system. This assumes that the large majority of future enrollees at RDI are employees of the MOA and its parastatals, who upon graduation will return to their former positions.