REPORT OF UNIVERSITY OF ILLINOIS STAFF

NJALA UNIVERSITY COLLEGE

SIERRA LEONE

PROGRESS AND WORK PLAN

March 15, 1964

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Chief of Party
University of Illinois/AID
Njala University College
October 1963 - March 1, 1964

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REPORT OF UNIVERSITY OF ILLINOIS STAFF AT NJALA UNIVERSITY COLLEGE, SIERRA LEONE

PROGRESS AND WORK PLAN

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I. Introduction

Njala University College will open its doors to students in late September 1964. Prior to this date, however, a great deal of activity will have been necessary to assure the success of this new educational venture in Sierra Leone. A brief resumé of the steps that have so far been taken will be useful in order to comprehend the future work plan. In all of this report, the coordinated efforts of both Sierra Leonean participants and the University of Illinois counterparts are interwoven.

II. Early Stages

A. Conversations between the U. S. AID Mission in Sierra Leone and the Ministeries of Natural Resources, Education, and Development resulted in a team's being sent to the United States in July-August 1962, to determine which academic institution the Sierra Leone and AID representatives felt could aid in the needed agricultural and educational developments.

B. As a result of this tour, a University of Illinois team surveyed agricultural and education problems in Sierra Leone in February-March 1963, and made recommendations in a report entitled "Education and Agricultural Development in Sierra Leone," March 25, 1963.

C. The report was accepted by the Sierra Leone Government; Njala College was authorized; Dr. S. T. Matturi was appointed Principal, effective June 1, 1963; and the Provisional Council of Njala College was appointed by the Government. The Council had its first meeting on June 21, 1963.

D. A contract was signed on August 16, 1963, by the University of Illinois and the U. S. Government to implement most of the suggestions made by the survey team. The contract signing followed planning and discussions between President David D. Henry, Dean Royden Dangerfield, Dean Louis B. Howard, Dean A. G. Grace, Dr. R. W. Jugenheimer, and Dr. K. E. Gardner, all of the University of Illinois, and Dr. W. S. Middaugh of AID/Washington, Dr. E. E. Neal, director of AID/Sierra Leone, and with Dr. S. T. Matturi, the new Principal of Njala University College.

E. The Chief of Party, Dr. Karl E. Gardner, and the Education Adviser, Dr. M. Ray Karnes, arrived in Freetown on October 15, 1963, to work with Dr. S. Thomas Matturi, Principal, the College Council, and AID and Sierra Leone staffs toward the establishment of Njala University College.

III. Progress Report (October 1963 through February 1964)

The Provisional College Council as appointed by the Cabinet is made up of leading citizens of Sierra Leone, and their interest in and devotion to the College have already been outstanding. The Council members have been provided, at their request, with publications depicting the services of the typical U. S. Land-Grant College, since they feel that Njala University College needs to use this kind of institution as a prototype.

The Principal, Dr. S. T. Matturi, has shown a high level of leadership during the preliminary stages of development. He is diplomatic and tactful, yet stubborn in his determination to build solidly and with foresight. Of minor and major irritations there have been a plenty; yet Dr. Matturi maintains his sense of balance and good humor. It has been a real pleasure for the counterpart staff members to work with this Principal!

The chiefs and many of the people in the area adjacent to Njala University College are showing great pride and interest in the new institution, and they are fully aware that it may make demands upon them as well as benefit them. Close and frequent liaison with them has been a project of Dr. Matturi's.

This brief summary reports some of the items of progress that make up the development of the College to date. It concludes with some of the "roadblocks" that will slow but not prevent the progress of the Institution.

A. General

1. The report of the Survey Team, "Educational and Agricultural Development in Sierra Leone," was printed by the Sierra Leone Government in December 1963.

2. An Act of Establishment and Incorporation and a set of Statutes were prepared for study and were later revised to incorporate suggestions of the Crown Law Office. Minor changes were made by the College Council and approved by that body preparatory to passage by Parliament.

3. A ten-point program, "Long-Range Plans for the College and Some Possibilities for Their Implementation," was prepared and sent to Council, Ministers, and others concerned. The program listed the need for a medical center for the College and the area nearby, a comprehensive primary and secondary practice and experimental school, additional land, an improved water supply, a sewage disposal system, road improvement, an augmented power plant, an improved postal and telephone system, banking facilities, and cooperative stores. (Appendix A)

4. Letters supporting the ten-point program went to the parties concerned, and conferences were requested. These conferences were held with the Ministry of Education, Ministry of Natural Resources, Ministry of Lands, Mines and Labor, Ministry of Health, Ministry of Works, Electrical Department, and two banking firms.

5. A paper, "Representation Concerning an Experimental School at Njala University College," was prepared by Dr. S. T. Matturi and Dr. M. R. Karnes and presented to the Minister of Education. (Appendix B)

6. Dr. Karnes delineated a student work program, explained in detail in a paper entitled "Work as an Instrument of Learning at Njala." (Appendix C)

B. Educational Pattern

1. The educational pattern of the College providing for degrees, diplomas, certificates, and other awards was prepared with the main features as follows:

   a. Four-year degree programs were set up in Agriculture and Education, including Home Economics, providing "Honours" and "Pass" degrees.

   b. Two-year certificate programs were prepared in Agriculture, Trades and Crafts, and Home Economics.

   c. Short-course programs were planned for persons not registered in degree or certificate programs.

   d. A diploma program in Agriculture was scheduled possibly by 1967.

2. Curricula for all academic programs were set up. (Appendix D)

3. Entrance requirements, tuition, fees, etc., were set.

4. A student handbook was developed to explain the purpose, curricula, entrance requirements, available facilities, costs, etc., of the College. (Appendix E)

5. The proposed academic program has been described via the radio, in correspondence, at secondary school principals' meetings, and in private conferences. The Principal and Staff are maintaining a program of information to keep educational leaders, potential students, Government, and the general public thoroughly informed about the College, its program, its objectives, and the opportunities it offers.

C. Personnel (Sierra Leone Staff)

1. A staffing schedule for 1964-65 was developed on the basis of curricular plans and projected student numbers. Advertisements were prepared relative to the positions available. The projected staff list with emoluments is shown in Appendix F.

2. Personal interviews were held with a number of Sierra Leonean candidates for positions on the College staff.

3. The College was fortunate to obtain Mr. Henry Lynch-Shyllon, of Sierra Leone's United Nations Mission, as registrar. He is studying the duties of a registrar at the University of Illinois.

4. Dr. Matturi left in late February for a 30-day search for staff in the United Kingdom.

D. Personnel (University of Illinois)

1. Dr. M. R. Karnes of the College of Education, University of Illinois, served as Education Adviser from October 15, 1963, to January 30, 1964.

2. Dr. K. E. Gardner of the College of Agriculture, University of Illinois, served as Chief of Party from October 5, 1963, to March 1, 1964.

3. Dr. Frank Klassen, Assistant Professor, College of Education, University of Illinois, replaced Dr. Karnes on March 1, 1964.

4. Dr. William N. Thompson, Professor of Agricultural Economics, College of Agriculture, University of Illinois, replaced Dr. Gardner on March 15, 1964.

5. Mr. W. Dewey Green, Assistant Chief Accountant, University of Illinois, arrived on February 4, 1964, to assist in setting up financial records of all types.

6. Mr. Jos. M. Barrow, Architect and Campus Planner, Urbana, Illinois, left for Njala in late March.

7. The Illinois staff at Urbana, including Dean Ryden Hangerfield, Dr. R. W. Jugenheimer, Thomas McCowen, Dean L. B. Howard, and Dean A. G. Grace, have been closely involved through these early stages.

E. Personnel (Participants--AID and University of Illinois/AID)

1. Mr. Renner Eric Mondeh, who had received his B.A. degree in the Arts Faculty of Fourah Bay College in 1963, entered the University of Illinois in September 1963 to study for the M.Ed. degree on an AID program. It is expected that he will return to Sierra Leone as a member of the Education Faculty at Njala.

2. Mr. Henry Lynch-Shyllon, M.A. Durham, Registrar, is at present a participant working with the University of Illinois Registrar.

F. AID and Embassy Staff

Dr. E. E. Neal, former Director of U. S. AID/SL; Mr. Clarke George, Acting Director; and particularly Mr. Hugh Richwine, Food and Agricultural Officer, have participated in all phases of the work, along with Mr. Don Spigler, Chargé d'Affaires. The assistance of Dr. Will P. Saunders, Education Adviser, Mr. Wayne Swedenburg, and all the others at the AID Mission and the Embassy has been magnificent!

G. Facilities and Equipment

1. The facilities at Njala, presently under the jurisdiction of the Ministries of Education and Natural Resources, will become the responsibility of Njala University College on April 1, 1964.

2. A survey and inventory was made of the buildings, equipment, and lands administered by the Teacher Training College, the Oil Palm Research Station, and the Agricultural Experiment Station. Since no architectural or other plans for buildings were available, they were measured and rough plans were drawn of most of the structures. The best possible use of each building and each room was determined, pending arrival of the Campus Planner.

3. Shop equipment in the amount of $21,000 was ordered through the University of Illinois. Office equipment orders amounting to $2,030 through February 28, 1964, and laboratory equipment orders in the amount of $3,270 were placed. A jeep was ordered at a cost of $2,522.35, and shipment was made. "Survival kits" of household goods were ordered for new arrivals at a cost of $350, and an emergency order was filled locally at a cost of $57.41.

   Book lists were inaugurated. Inquiries were made relative to hand-operated farm machines: peanut hullers, coffee hullers, rice hullers, palm kernel-cracking devices, and other food-processing machinery. Equipment and supplies for setting up an accounting system were ordered at a cost of $1,256.

H. Budget

Two of the most demanding tasks were the preparation and the support of the budget (estimates) of the College. The budget suggested by the University of Illinois Survey Team in its report of March 25, 1963, called for Sierra Leone Government funds in the amount of $397,320 for the year 1964-65 in addition to a projected budget of $175,649 for the Rice Research Station, or a total of $572,969. This total included mainly recurring funds with a very minor capital budget.

During May 1963, the Cabinet of the Government of Sierra Leone approved in principle a budget of $560,535 for recurring expenses and a capital budget of $88,200, for a total of $648,735.

A new budget was prepared and presented to the College Council and to the Ministry of Finance in late 1963. Some reductions were made as a result of the decision to hold the secondary practice school project in abeyance for a year or two. The revised budget called for $560,115 of Recurring funds plus a Capital Development estimate of $168,848, of which $89,600 would be immediately available. The cabinet and House must vote on the budget. U. S. AID funds budgeted for equipment purchases would approximate $140,000.

Projected development of Experimental School described in Appendix I will also be reduced in scope.

I. Roadblocks and Their Solution

1. The shortage of funds in the Sierra Leone Government's treasury does hamper the Government in implementing many projects that it feels are badly needed. Political considerations also must receive attention, as in all governments, and the expenditure of funds is not always wise or economically justifiable. The decision to develop additional teacher training institutions instead of consolidating them and strengthening them is a case in point.

   The College will attack this problem of short funds as follows:

   a. Present to the Government budgets containing no frills or waste.

   b. Attempt to gain assistance from numerous outside sources.

   c. Make maximum use of existing facilities and insist on internal economies.

   d. Encourage an enrollment that will afford maximum efficiency, and hence make the most effective use of staff resources.

2. An incomplete understanding by some of the U. S. Embassy and AID staff as well as by several Government Ministers of Sierra Leone relative to the provisions of the Survey Team Report and the contract was one temporary handicap. As late as December 1963 it was not thoroughly understood that Njala University College was dedicated to the education of both agriculturists and primary and secondary teachers, not agriculture students alone. This failure of understanding was overcome through conferences.

3. One serious delay is the decision of the Council to postpone implementing a secondary practice-experimental school. (A primary practice school already exists.) Several College Council

members felt that the cost of such an experimental school might be excessive at first. Since more and more secondary schools must be built all over the country, pressure for this experimental school at Njala will not be relaxed.

4. The new policy (included in the contract) of AID/Sierra Leone to the effect that no more capital expenditures would be made at colleges and schools came at an inopportune time for Njala University College's development. Now that Commonwealth Development and Welfare Funds are depleted, the need for such assistance is greater than ever.

   The proposal that the students at Njala should build the needed facilities is not altogether realistic, though student labor will be a considerable factor in certain types of construction.

   The solution to this problem is four-fold:

   a. Continual pressure will be exerted on the Sierra Leone Government and in particular the Production Marketing Board to provide essential capital items. The Marketing Board's income is from the marketing of farmers' products, and surpluses are supposed to be used to assist the agriculture of Sierra Leone. What would be of greater use than to assist the agricultural program of Njala?

   b. Foreign governments and foundations and private and corporate donors will be solicited.

   c. Students will help to build the less difficult construction.

   d. Some assistance from AID in the construction of staff housing and possibly other items is still a possibility.

5. One very serious handicap is that of obtaining adequately prepared academic staff. Unfortunately, although the Sierra Leone Government has paid the schooling costs of many students in institutions for higher learning over the years ($330,000 expended in 1962-63 for overseas scholarships alone), practically none of these students were prepared for teaching agricultural subjects or for other agricultural research and extension positions in a college such as Njala.

   Some students, in fact, do not return to Sierra Leone in spite of a real obligation to do so. A search for qualified West Africans is in process, and Dr. Matturi went to England in late February primarily for this purpose.

The use of any considerable number of expatriates on the staff has certain drawbacks. They "cost" several times as much as Sierra Leoneans when travel, family allowances, and shipping costs are considered. They usually hold principal loyalty elsewhere, and they rarely make plans to throw in their lot with the Africans permanently. Ultimately, their continued use skirts and postpones the primary objective of the United States participation: that of developing Sierra Leoneans as teachers, researchers, and administrators. The contract provides through its counterpart and participant features a partial solution. The establishment of Njala University College will slowly effect a remedy.

IV. Work Plan for Period March 1964 Through August 1964

The steps that the University of Illinois and its Njala and Urbana staff members should consider in the further progress of Njala University College will be listed as suggestions. This projected work plan is not considered a straightjacket, nor is it the product of unusually wise and farseeing academicians.

A. General

1. Teacher Education Included. A clear understanding, on paper, should be forthcoming, providing support for the teacher education program included in the Survey Report, the official contract, and other documents. It is essential that AID/Sierra Leone give unqualified support, and that the position of the Sierra Leone Government be clarified. (NOTE: In mid-February, verbal assurances of support were given at a Council meeting by both the Minister of Education and the American Chargé d'Affaires.)

2. Problem of Continuity and Information. Changes of personnel in Sierra Leone ministeries, in the U. S. AID Mission, in the make-up of the College Council, and, for that matter, in the campus and counterpart staff of the University of Illinois make frequent briefings necessary in order to keep all concerned properly informed. Copies of policy statements, significant correspondence, Council minutes, and other pertinent papers must be made available to interested parties at the University of Illinois, AID in Sierra Leone and Washington, Njala University College, and the Ministries of Natural Resources and Education. This is not an easy task, but an absolutely essential one. The degree of liaison between all parties, particularly during the first formative years of this project, will to a very real degree determine the success of the institution.

3. Basic Philosophy--Explanation and Dissemination. The Provisional Council, the Principal, and certain key people in the Sierra Leone Government have subscribed wholeheartedly to the basic philosophy behind the United States Land-Grant College movement. In a like manner, new Njala University College students and new staff members, regardless of their origin or previous training, must be imbued with the same enthusiasm for this philosophy: dignity in all work conscientiously attacked, the debt of educated men to the greater community, the University as an active participant in the problems of the country, and the spirit of service to the group and to the individual at all levels of society.

4. Extension Work. Plans must be started for developing the College Extension program and simultaneously for the coordination of this program with existing work in the Ministry of Natural Resources and in the Ministry of Social Welfare. (See Appendix G.)

5. Integrating Rokupr With Njala. The staff, facilities, and work of the Rice Research Station at Rokupr must be integrated with the pattern of teaching, research, and extension in agriculture at Njala. Maximum efficiencies at both locations call for careful planning. This planning has just been initiated.

6. Improved Supervision. Starting on April 1, 1964, the farm labor and the technician staff, as well as several specialist staff members, will be "taken over" by the new institution. Improved supervision of all staff becomes imperative, and particularly so since the atmosphere in recent months has reflected a "closing-out" attitude and also a feeling of insecurity. The "interim caretaker" atmosphere must immediately, on April 1, be replaced by a new dedication on the part of academic and nonacademic staff alike. The humdrum routine work of technicians who have, unfortunately, been insufficiently directed must be redirected. This will call for assistance from counterpart staff.

7. The Experiment Station. Work must be based at first on practical projects that are properly outlined on paper and approved and that are within the capabilities of the staff at a given time. When the adviser to the Director of Research (Experiment Station Director) arrives, at least some outlines and programs should be ready for his scrutiny and evaluation. Equipment for the Station will be ordered after arrival of administrators in this organization.

B. Personnel

1. Search for Sierra Leone Staff. University of Illinois staff at Njala and at Urbana must actively assist the Principal in the search for regular academic staff. Recent graduates or

advanced degree students interested in Sierra Leone, particularly West Africans (Sierra Leoneans, Nigerians, Ghanaians, Gambians, etc.) should be contacted in U. S. colleges by whatever means are most suitable. Counterparts cannot be posted until Njala University College positions are filled.

2. University of Illinois Counterpart Staff. Counterpart staff must be obtained by the University of Illinois to meet the contract commitment to provide at Njala the following:

   a. Full-time staff (already named by March 1, 1964)

      (1) Chief of Party, Adviser to the Principal.

      (2) Adviser to Director of Teacher Training.

      The assignment of counterpart staff in these two positions has been covered in the Progress Report (Para. III d).

   b. Full-time staff (additional staff needed by September 1, 1964, and preferably one to three months earlier)

      (1) Adviser to the Agronomist (Soils) and to the Director of the Experiment Station.

      (2) Adviser to the Specialist in Crops.

      (3) Adviser to the Agricultural Engineer.

      (4) Adviser to the Director of Extension.

      (5) Adviser to the Home Economist.

      (6) Adviser to the Agricultural Shop Specialist.

      These six positions have recently been approved, and candidates for two of the positions are fairly certain at this time.

   c. Short-time staff (positions approved)

      (1) Records and Accounts Specialist (Mr. W. Dewey Green is at Njala and will remain until June 1. Ideally he should return for one month about October 1.).

      (2) Campus Planner and Architect (Mr. Joe Barrow is scheduled to arrive in late March.).

      (3) Administrative Assistant (This person will be more badly needed as more Illinois staff arrive. At present, considering housing shortage and other conditions, it may not be easy to fill. It could be a long-time position.)

d. Short-time staff (position not yet officially approved)

(1) Adviser to the Registrar (The possibility is being studied of obtaining Mr. Earl Seyler, formerly registrar at the University of Illinois and now at the University of Liberia, for three weeks beginning in August or September 1964.)

3. Participants

a. The Njala Home Economist who is appointed should serve one year on the participant program in the U. S., but this is possible only if a "junior" home economist is employed and if a counterpart is sent by the University of Illinois. Two Sierra Leonean home economists will be needed at Njala for teaching, food service administration, and women's counseling.

b. Mr. Siaka Kawa, B.Sc. Wye College (London) 1956, presently Instructor in Agriculture at Njala, was recommended for participant training in Agricultural Extension in the USDA 5-month program, to be followed by five or six months of additional work at Illinois. It is expected that he will return to the extension staff at Njala.

c. Mr. Mondeh will continue as participant in Teacher Education. (See III E.)

d. Mr. C. P. Foray, a Sierra Leonean with British Petrol Ltd., and a graduate of Fourah Bay College in Education, was approved in February by the Council for participant training leading to the Ph.D. degree in education.

e. Mr. W. C. E. Taylor, Entomologist in the Ministry of Natural Resources, was also recommended for participant training at the University of Ibadan for two years. He holds the B.Sc. degree in zoology and entomology from the University of London.

f. Other participants will be named as the need becomes apparent.

C. Agricultural Program

Suggestions for the development of the agricultural program are listed in a paper that is appended, "The Agricultural Programme at Njala University College." This includes the instructional, research, and extension aspects of the program. (Appendix G)

D. Home Economics Program

A suggested program in Home Economics is described in Appendix H.

E. Experimental School

The papers "Phased Development of the Experimental School" and "Representation Concerning an Experimental School at Njala University College" are appended (Appendices B and I). There is general agreement among the members of the Council on the need for the school. The plans will be held in abeyance for at least one year only because of a lack of funds needed for implementation. This program must not be allowed to die.

F. Student Work Program

Implementation of this program (see Appendix C) will be no small task, and it must receive the devoted concern of every individual staff member! Much of the ongoing construction, food service, janitorial and maintenance work, agricultural research, and farm operations depends upon the successful conduct of the work program.

G. Campus Planning

Some of the problems confronting the Campus Planner are listed, and a few solutions are suggested in Appendix J.

1. Faculty Housing. Useful housing on both the College and Station campuses will provide for not more than 30 families, whereas it is contemplated that the need will approximate 45 units. This situation will call for immediate attention. Dr. Matturi has obtained and stored considerable quantities of building supplies. During the summer of 1964, some start should be made on construction. There is a possibility that certain of the 140 Peace Corps volunteers in the country will be available to help start this program, and later the students of the College will carry on in the laboratory training program, in construction work, and in the work-for-income program to be instituted for the students.

   The Campus Planner-Architect, the Agricultural Engineer, and the Shop Specialist from the Illinois staff will be key persons in the entire program of construction.

2. Instructional and Research Facilities. The projected remodeling and construction program for campus structures is suggested in the Appendix relative to campus planning. (Appendix J)

3. Land Acquisition. The plan is to acquire some 2,250 acres of land contiguous to both the Station property and the College land. This is essential to provide room for future growth of the experimental plots and the campus area. Excellent bottomland in the "U" created by the Taia River was, some years ago, planted to oil palms, whereas the poorer upland areas would

have been more appropriate for the plantation. A second "U" of the river creates a similar area which would be ideal for studies of horticultural annuals, sugarcane, soybeans, and other high-value-per-acre crops.

Extension of the property is also necessary on both sides of the spur road which leads from the Taiama-Mano-Bo road to the College. Survey of the land is needed, along with further conferences with Paramount Chief Chappi III and local section and village chiefs, to solve many problems, e.g., the problem of the "dispossessed."

H. Accounting Procedures and Financial Records

The accounting procedures and financial record-keeping system is presently being developed by Njala by Mr. W. Dewey Green of the University of Illinois. Within a month, over 150 farm employees as well as clerks, specialists, and administrative staff will be absorbed by the new institution, with all the problems of payrolls, rental charges, allowances, and retirement and income tax deductions.

Another example of the task at hand: With the purchase of five vehicles for the College and the start of the installation of petrol and diesel tanks and pumps, a motor pool-garage operation has begun. Policies on handling vehicles, fuel, and repairs for both College and private vehicles must be established soon, along with driver training and vehicle maintenance programs. The assistance of the Accounts and Records Specialist will be invaluable.

I. Equipment and Supplies

1. Present Equipment and Supplies. The Ministry of Education has made a complete inventory of all of the equipment and supplies presently situated at the Njala Teacher Training College. It has invited the Administration of Njala University College to identify what it will need, and this will be left for the use of the new school.

   In like manner, the Ministry of Natural Resources has indicated, verbally, its intention to leave equipment and supplies at the Agricultural Experiment Station, the Oil Palm Research Station, and the Rice Research Station at the disposal of the College.

   These measures will be of tremendous assistance to the College.

2. Books. A search must be made for low-priced student textbooks, possibly paperback, for such subjects as general chemistry, botany, zoology, physiology, history, education, economics, agricultural subjects, genetics, physics, etc. Sources include The English Language Book Society (U. K.), and McGraw-Hill, International Division.

Reference books, magazines, periodicals, fiction and nonfiction, etc., must be ordered. The University of Illinois library is preparing a list of some 5,000 "basic books" for opening the new College library. These must be scrutinized and placed on order.

3. Library. Plans have been drawn and bids invited for stacks, study tables, chairs, etc., for the library. Two air conditioners will be needed to protect books from mold, provide good study conditions, and allow for permanent closing of windows for book safety. These last items are on order. Additional equipment, such as the catalog file, will be imported.

4. Home Economics Laboratory Equipment. Laboratory equipment for the cooking and nutrition classes must be obtained before September 1964. Plans have been drawn and a suggested equipment list prepared for criticism by Sierra Leone AID staff and by home economists at the University of Illinois.

   Equipment for the textiles and clothing laboratory is also included in this list. Some equipment has been purchased by the College from local sources in Freetown.

5. Dining Hall Equipment. The dining hall will serve two functions--provide food service and serve as a laboratory for home economics students interested in institution cookery. Needed new equipment will include a jacketed steam cooker, fuel oil and wood stoves, refrigerator and deep freeze, meat block, preparation tables, sinks, utensils and utensil racks, and a water dispenser. The storeroom will require dunnage, racks, and bins, while the dining hall itself will need new tables, chairs, and serving and eating utensils. No orders have yet been placed for this equipment.

6. Dormitory Equipment. Student desks, lamps, beds, and the like are probably a responsibility of the College rather than AID.

7. Physical Education Equipment. Possibly the Peace Corps may be able to assist in this field, but the contract will probably carry most of the load. Mr. Tom Harrison of the Peace Corps, located at Njala, has agreed to assist in planning.

8. Recreational Equipment and Supplies. Orders must be placed for recreational equipment, such as a record player and records, motion picture projectors and screen, public address system, ping-pong tables, indoor and outdoor games, and snack bar equipment, including a refrigeration unit.

9. Chemistry and Other Laboratory Equipment and Supplies. Botany and zoology laboratory equipment lists have been prepared, and suggestions have been obtained from the University of Illinois

Zoology Department. Orders must be formally placed. Chemistry equipment is not needed at the start, and the chemistry instructor who will be appointed can prepare a list of needs later.

J. Budget (AID Sources)

1. Equipment and Supplies. A budget prepared at this stage of the development of the program will not be extremely accurate, but it will indicate those projected expenditures, using U. S. funds, which appear necessary at this time. (Appendix K)

2. Salaries and Allowances. This budget is required by May 1, 1964, for the one-year period from September 1, 1964, to August 31, 1965, and will be supplied later.

Report prepared March 15, 1964, by:

Karl E. Gardner, Ph.D.
Associate Dean, College of Agriculture
University of Illinois
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APPENDIX A

From: The Office of the Principal, Njala University College, Njala,

To: Honourable Ministers, Heads of Government Departments; Chairmen of Boards; Councils and Commissions; and Members of the Provisional Council of Njala University College.

November 1, 1963.

CONFIDENTIAL

LONG-RANGE PLANS FOR THE COLLEGE AND SOME POSSIBILITIES FOR THEIR IMPLEMENTATION.

1. The distinguished leaders to whom this memorandum is addressed have demonstrated interest in the exciting institution to be known as Njala University College. While the United States Government is making substantial contributions in the form of financial assistance and technical man-power support, the comprehensive institution to be developed can become indigenous to Sierra Leone, and directly responsive to the compelling problems of the people of this country, only if it enjoys not merely strong moral support but substantial financial assistance as well from the Government of Sierra Leone -- her various Ministries, Boards, Councils and Commissions.

2. Through the Provisional Council of Njala University College, and later through the regularly constituted Council to succeed it, there will be submitted from time to time representations which will be of direct and immediate interest to you. The purpose of the present document is not that of initiating specific requests, but rather that of indicating something of the magnitude of the task of developing the College and suggesting the scope of work envisaged for this new institution.

3. In order to present the scope of the problem of developing the physical facilities and providing the many services required during the first phase of developing the comprehensive College Community envisaged, and to place in context each major feature thereof, we present the following tentative analysis of facilities and services, along with an indication of the Agency which might be appropriately concerned with each. The items listed below include only the auxiliary services and facilities required to support the instructional, research and extension functions of the institution. With prompt response to this appeal it may not be necessary to include the items of public utilities in the budget of the College which will, among other items, comprise funds for instructional, research and extension facilities as well as housing for staff and students.

Facility and/or Service	Agencies concerned
1. Medical Centre -- complete medical and dental clinic and hospital -- to serve students and staff members, and all the people within commuting distance of Njala, whether connected with the College or not.	Ministry of Health.
2. Sewage Disposal Plant -- also incinerator.	Ministry of Health.

Facility and/or Service	Agencies concerned
3. Comprehensive Practice School -- Nursery, Kindergarten, Primary and Secondary Departments - to serve all young people of the greater College community (the children of staff members and of other employees, and children from the surrounding villages). Apart from meeting an urgent educational need in the area, the Experimental School should be an integral part of the Teacher Education Programme at Njala.	Ministry of Education
4. Additional Land -- this is required almost immediately for the several farms of the Faculty of Agriculture and in anticipation of the development of a major institution and of the eventual growth of a model community adjacent thereto.	Ministry of Lands, Mines and Labour.
5. Water Supply -- adequate system required to supply pure water for the College and the surrounding community which will undoubtedly develop, either from deep well sources or the river Taia with water purification plant.	Ministry of Works.
6. Highway and Roads -- Roads within the College community and completion of pavement from Taiama to Njala.	Ministry of Works.
7. Power Plant -- greater output of electricity required to meet demands for laboratories, domestic use in the College and surrounding areas.	Ministry of Works.
8. Post Office and Telephones -- Improvement of existing facilities and the development of an efficient internal telephone system.	Ministry of Communications.
9. Banking Facilities	The Managers, Bank of West Africa, Intra Bank, Barclays Bank.
10. Co-operative Stores -- school supplies, food, clothing, hardware, petroleum products, butane or propane, bulk storage and supply etc.	Ministry of Trade and Industry (Registrar of Co-operatives).

4. The preceding auxiliary facilities and services are urgently needed during the first two years of operation in order to carry out the essential functions of teaching, research and extension in a manner characterised by quality and efficiency. Hopefully, the items listed suggest the kind of College Community development which will enable the institution to remain responsive to the most pressing problems of the people of Sierra Leone. It may readily be anticipated that, whether planned or whether left to chance and haphazard growth, Njala University College will in time attract many people to the area, and thus a major community will develop adjacent thereto. Our contention is that, in order for the College to achieve the high hopes, aspirations and expectations now being set forth by the many citizens interested in this venture, the total development (the College proper as well as the larger community) should evolve as an outstanding model of a progressive community and a cultural development which will stimulate community improvements throughout Sierra Leone.

5. May we humbly request your consideration of and response to the suggestions hereby submitted. Our plan is that by November 15, 1963 a detailed representation for the most urgently required facilities listed above will be submitted to the Ministries and Agencies directly concerned, in the hope that major strides can be made in developing the College Community during the coming two years.

S. T. Matturi

(DR. S.T. MATTURI)
Principal
Njala University College.

M Ray Karnes

(DR. M.R. KARNES)
Adviser on Teacher Education.

K. E. Gardner

(DR. KARL E. GARDNER)
Adviser on Agricultural Education and Administration.

Njala University College,
NJAIA, via Mano.

APPENDIX B

CONFIDENTIAL

Office of the Principal
Njala University College
November 15, 1963

The Honourable A. Wurie, M. B. E.
Minister of Education
The Ministry
Freetown, Sierra Leone

REPRESENTATION CONCERNING AN EXPERIMENTAL SCHOOL AT NJALA UNIVERSITY COLLEGE

1. Our memorandum of November 1, 1963 makes reference to an experimental school as an item of strategic importance in the development of the total Njala University College community and the successful prosecution of the aims of the college. We most respectfully submit at this time a representation, in six parts, concerning the experimental school: (a) rationale for the school, (b) general purposes and characteristics of the experimental educational programme, (c) physical facilities, (d) staff requirements, (e) goverance of the school, and (f) estimates.

2. Rationale. We are proposing that an outstanding, comprehensive experimental school to accommodate, in addition to an indoterminate number of adults, approximately 1,000 full-time pupils. (600 in the nursery school, kindergarten and primary school, 400 in the secondary school, Form I through Form V) be located on the campus of the Njala University College. The following statements are presented in support of this proposal:

(a) The expectation is that Njala University College, through the educational, research and extension activities it fosters, will have important impact upon all the citizens of Sierra Leone--their education, economic security, health and general welfare. The experimental school is envisaged as the College's basic educational laboratory.

(b) Sierra Leone is sorely in need of an imaginative experimental school of the highest quality, free of the inhibiting influences of traditional practices, to set the pace for the educational revolution indicated.

(c) The hope is that the total Njala University College community will develop as a model for community improvement throughout Sierra Leone. The school proposed is vital to that order of development.

(d) The school is essential to the prosecution of the teacher education function of Njala University College. Such a school is needed as a laboratory in which educational research will be conducted. It will provide prospective teachers with ample opportunities to observe and participate in the most progressive educational developments, thus preparing them for promoting further improvements in the public schools of Sierra Leone.

(e) A first-rate school, from nursery through Form V, is required if Njala University College is to attract and hold outstanding staff members for whose children a school of quality must be provided.

(f) Even though in a strictly rural area, a survey would probably reveal that there are now at least 1,000 children of school age within commuting distance of Njala, and for whom school places are not now available. (An accurate assessment of school population in the area is suggested as a part of the preliminary planning for the school.)

3. Purposes and Characteristics of the Educational Programme. The Experimental School will provide a varied and flexible educationa programme in direct response to the major problems which confront our people. Therefore, the major purposes of the School, derived from crucial problems, will be to:

(a) Provide a basic, fundamental education which will raise the literary level of all and enhance their intellectual development.

(b) Develop understandings and skills which will improve the health of the people and enable them to provide for themselves a healthful, sanitary environment in the home, at work and in the community at large.

(c) Develop occupational skills and knowledge and prepare for socially desirable, useful employment and thus enable the recipients of education to raise their standard of living.

(d) Prepare for effective participation as a responsible citizen in the home, the community, and the State.

(e) Enhance the aesthetic experience of all who come in contact with the School.

4. The prosecution of these broad purposes dictates that the School shall offer a very comprehensive programme. To make this economically feasible, the School must necessarily be very large and serve great numbers of people, youth and adults alike. The following are suggestive of the breadth and scope of the courses and of the emphases to be built into the educational programme:

(a) The full range of academic subjects: emphasis upon such tools of learning as reading, rhetoric and composition; speaking; mathematics; the physical, biological, and social sciences; fine and applied arts; and the humanities.

(b) Applied courses in agriculture and home economics.

(c) A variety of other practical programmes designed to prepare for employment in industrial, technical, business, and office occupations.

(d) Special programmes for adults for the purpose of eradicating illiteracy and enhancing their occupational competence.

(e) Special programmes for the slow learner, the mentally and physically handicapped.

(f) For pupils of high intellectual capacity, rigorous programmes which prepare for further education beyond the secondary school.

(g) A comprehensive programme of health and physical education.

(h) A comprehensive work experience programme designed to inculcate the dignity of labour and afford opportunity for application of principles taught in the formal courses pursued by pupils.

5. Physical Facilities. Much hard work and planning with reference to the educational programme must be done, of course, before arriving at specifications for physical facilities for the proposed Experimental School. We do suggest, however, that a rather massive physical plant will be required to achieve the purposes envisaged. Our estimate at this point is that a minimum of 250 acres of land will be required to provide space for the instructional facilities, staff housing, playgrounds and recreational facilities, and for the school gardens and farms, livestock, piggery and poultry establishments, workshops, and model industrial developments envisaged in connection with the work experience feature of the School.

Our thinking is that pupils will construct, over a long period of time and as part of their learning experience, much of the physical plant for the school, but that Government should appropriate funds for the architectural planning and the construction of the central instructional facilities and for staff housing. We favour relatively inexpensive, but modern, functional, and aesthetically-pleasing architecture throughout.

6. Our preliminary estimate is that the central instructional facilities for the proposed Experimental School will require in the neighbourhood of 75,000 square feet of floor space, and that approximately 50 dwelling units will be required for staff housing. We are assuming that such utilities as water and electricity, and such services as health and medical and central stores requested as a part of the development of greater Njala University College community will be adequate to serve the Experimental School as part of that community.

7. Staff Requirements. It is anticipated that a minimum of 50 full-time staff members will be required to man the Experimental School by the time total full-time pupil enrollment reaches 1,000. This is based upon the assumption

that the maximum teacher-pupil ratio should not exceed 1 to 20. In addition, the services of several members of the Njala University College faculty will be involved in administrative, supervisory, and instructional activities of the School. For example, the Director of Teacher Education will serve also as Principal of the Experimental School; the person in charge of preparing secondary school teachers in the College will serve as director of the secondary programme in the Experimental School; the primary education specialist of the College faculty will direct the nursery school, kindergarten, and primary sections of the School. The Director of Extension might quite appropriately serve also as Director of Adult Education in the Experimental School. Furthermore, certain members of the research and teaching staff of the College might teach particular advanced and specialized courses in the secondary and adult branches of the Experimental School.

8. The hope is that the School can be staffed with highly educated, thoroughly competent, creative, imaginative professional people who will contribute to the development of a new pattern for public education in Sierra Leone.

9. Governance and Policy Formulation. Our urgent recommendation is that the school be free to evolve, under broad general policies established by its governing body, the Council of Njala University College (or a sub-committee thereof), its own admission standards, internal examinations, graduation requirements, and curricular offerings. We suggest further that an exploratory, experimental, research, and pioneering attitude be encouraged, and that in no way should existing requirements restrict the important developmental functions of the Experimental School.

10. Hopefully, the broad frame of reference under which the School operates will permit the development of programmes which start at whatever level required to meet the remedial and developmental needs of youth and adults who

seek the advantage of the School. There should be a strong commitment to the idea of starting where the people are. What the clientele to be served bring to the School in the way of previous learning, along with their pressing and immediate educational needs, not some pre-determined notion of external standards, will determine the starting point as well as the nature of the programme of studies pursued by each individual.

11. This, then, is to be a school without precedence in Sierra Leone. Only the most liberal and forward-looking policies will foster its development into an institution which earns the right to be termed a school of high quality as a result of its response to the real live needs of the people it serves and of the State which provides for its support.

12. Estimates

Phased Development of Experimental School

Junior Segment

	Nursery	Kindergarten	Elementary	Total
1963/64	-	-	366	366
1964/65	20	30	400	450
1965/66	40	60	450	550
1966/67	40	60	500	600

Senior Segment

	Form I	Form II	Form III	Form IV	Form V	Total
1964/65	75-90	-	-	-	-	Approx. 160
1965/66	75-90	75-90	75-90	75-90	-	Approx. 320
1966/67	75-90	75-90	75-90	75-90	-	Approx. 400

If our requests for capital grants to build a hall or residence, laboratories and lecture rooms for the University College are successful, then in the 1964/65 school year Forms I and II of the senior segment of the Experimental School could be started with the present facilities at the Training College. The second phase of this development will be the addition of Forms III and IV in 1965/66 and finally Form V in 1966/67.

Each Form will consist of three streams, each class having a maximum enrollment of 30 pupils.

The entire Experimental School will be co-educational in character; the junior segment will comprise day pupils and the senior segment mainly boarding pupils, who will come from various parts of the country.

We appreciate that several discussions will have to take place on this specific proposal, and we should be only too pleased to participate in these whenever and wherever you choose to have them. Following these discussions some realistic estimates could then be presented.

S. T. Matturi

Dr. S. T. Matturi, Principal
Njala University College

M. Ray Karnes

Dr. M. R. Karnes
Educational Adviser

K. E. Gardner

Dr. K. E. Gardner, Agricultural
and Administrative Adviser

cc: Minister of Natural Resources

APPENDIX C

Work as an Instrument of Learning at Njala.

1. The very nature of the problems, the hopes and the aspirations which prompted the establishment of Njala University College, as well as the major purposes to which the institution is to be responsive, strongly suggest and intimate relationship between work and the realization of purpose at Njala. All policies and regulations concerning work to be performed by staff and students at Njala should be formulated with the thought of developing and appreciation of the worth and dignity of all socially-desirable, useful and productive labor. These policies and regulations should like-wise express genuine concern for the worth and dignity of the individual who engages in such labor. If Njala is to achieve its high purpose, it will become known as an institution in which useful work is highly regarded and in which the diligent worker is respected.

2. Purposes of Student Employment Programme. Aside from utilising work as a means of developing an appreciation of the dignity of labor, it should be made to serve at least three additional purposes:

a. Enable large numbers of students to defray at least a part of the cost of their education.

b. Serve as a means of making practical applications of materials studied in organized classes, and thus reinforce learning and further the educational objective.

c. Provide a background of practical experience and develop useful skills and work habits which will contribute to the occupational competence and employability of the individual.

3. Policies Concerning Work. The following are suggested as policies which should affect the employment of full-time members of staff as well as students employed on a part-time basis:

a. By all acts and pronouncements for which members of faculty and staff are responsible, encourage recognition and acceptance of the importance and dignity of labor.

b. Establish only those full-time and part-time positions which involve work of importance to the successful operation of the institution in response to its instructional, research and extension functions. All "made work" positions should be discouraged from the outset. Any tendency to permit the institution to serve as a sort of welfare agency for the otherwise unemployed will retard the achievement of its legitimate educational objectives.

c. All work performed by students and members of staff must be purposeful and useful in character, efficiently and diligently prosecuted.

d. Provide the tools and equipment which will take the drudgery out of work, but select simple and inexpensive implements which are ressonable in view of the present level and current rate of economic development within the State.

e. To the maximum extent possible, exploit students in getting the work of the institution performed. Establish full-time positions and fill them with full-time members of non-academic members of staff only in situations in which the tasks involved cannot be performed successfully by part-time student employees.

f. Commit a sufficient amount of the time of both academic and full-time non-academic members of staff to supervision and on-the-job training of students employees to ensure the success of the student employment programme. Establish potential for contributing to supervision and on-the-job training of students as one criterion for the selection of full-time employees.

g. Initiate a reward system and establish a wage scale in which advancement in pay and level of employment is based upon quality of performance in previous job assignments. Initiate a system for rating and evaluating the performance of students in their part-time jobs.

h. Establish performance in the part-time job as one criterion affecting the decision as to whether the student continues in the institution.

i. Perceive and utilize work as a positive influence. In no instance should the work assignment be used as a punitive measure to discipline a student.

j. From the beginning, instill the idea that a student earns the right to a part-time job by doing the job well. Hiring and firing practices should be no less demanding than in the best employment situations outside the institution, on the same basis as in Government or in the private sector.

k. Make as a condition of employment on a full-time basis the requirement that all the school-age children of the employee attend school, thus demonstrating the interest of Njala in promoting education in general.

l. Since English has been adopted as the official language of Government and of the school, and since there is to be a close working relationship between students and members of non-academic staff, make literacy in English (ability to read, write and speak English) a requirement of continuing employment. Insist upon the use of English as the means of communication on the part of everyone connected with the institution.

m. Make the pursuit of learning an important consideration in advancing employees to positions of greater responsibility. In addition to programme of literacy instruction which will be necessary to enable certain member of non-academic staff to meet the condition of literacy in English, conduct part-time classes for non-academic employees which will contribute to their job proficiency.

n. Develop a student employment programme to the extent that every student has the opportunity of working enough hours to defray the cost of tuition and room and board. Depending somewhat upon Government's practices and policies with reference to the granting of scholarships, it should be the aim in at least this one institution, particularly in view of its functions, to move as rapidly as possible from a programme of free Government scholarships to a situation in which the student has the opportunity of earning enough to pay his own school expenses.

4. In addition to the opportunies to be found in other educational establishments, there will be many opportunities which derive from the nature and functions of this particular one. For example, it is anticipated that at Njala many agricultural ventures will be pursued and that a great variety of industrial and technical developments will occur, related in the main to agriculture. Their exploitation requires that pilot or demonstration plants be designed, constructed, operated and evaluated. Some of the opportunities will not arise

until the institution is rather fully developed, but many will be present with the enrollment of the first group of students. As students advance in knowledge and skill, and as the institution grows, there will be a correspondence increase in the complexity of the work which can be performed successfully by students. The following is only suggestive of the range of student employment possibilities in such an institution as envisaged at Njala.

5. Office and Clerical Work. While commercial subjects will probably not be added to the instructional programme of the College for some years to come, it is anticipated that preparation for office and business pursuits will be provided in the attached Experimental School. In any event, there should be some students in the College who can succeed at and profit from experience in such assignments as that of:

(a) file clerk, (b) stenographer, (c) receptionist, (d) stores clerk, (e) cashier, and (f) junior accountant.

6. Printing and Duplicating. As the institution develops, there will be need for the duplication of a great variety of forms, reports, extension bulletins, courses of study, and teacher-prepared instruntional materials. In time, there will be need for extensive duplicating facilities on the campus, and these will provide opportunities for employment ranging from operating mimeograph machines to making plates, setting up and operating offset (lithography) equipment.

7. Food Service. The food service programme should provide opportunity for practical work experience in one important phase of home science for students who pursue study in this field. This programme should provide experience in all aspects of the operation: (a) the dietetic, nutritional and economic problems in the planning of meals, (b) the management of institutional food service, (c) the actual preparation of food, cooking and baking, (d) the serving of meals, etc.

8. Agricultural Experimentation and Production. The agricultural research, demonstration and production projects to be pursued at Njala will afford direct experience in all aspects of agriculture; (a) the preparation of plots and the

cultivation of various kinds of crops involved in agricultural experiments, (b) plant breeding and the production of plant material, (c) care and feeding of livestock and poultry, (d) harvesting and storage of agricultural crops, etc.

9. Food Processing. By the time the degree programmes in agriculture and home science are developed to the point that the first degrees are granted, agricultural engineering and food technology will be advanced to the point that at Njala various food processing plants can be established on a pilot or experimental model basis. The following are examples of possibilities which will provide opportunities for valuable work experience: (a) cannery, (b) abbatoir and meat processing plant, (c) poultry dressing plant, (d) food dehydration plant, (e) frozen food plant, (f) fruit and juice bottling works, (g) rice mill, (h) oil palm pericarp mill, (i) oil palm kernel processing plant, (j) ground nut oil and ground nut better plant, (k) egg candling and grading facility, (l) feed mixing facility (feeds for poultry and livestock, (m) bone and blood mill (for bone meal and tankage production).

10. Construction and Maintenance of Physical Plant. Experience in a great variety of mechanical and technical pursuits can be provided many students in the construction and maintenance of the buildings and equipment which comprise the physical plant. The recommendation is that such urgently needed structures as a library, science building, and student center be constructed by outside firms during 1964 and '65. By the end of 1965, students will be sufficiently advanced through instruction and experience on the job that they can serve at least as helpers or apprentices in such occupations as the following: (a) automotive, and tractor and farm implement mechanic, (b) electrician, (c) painter, (d) mason, (e) concrete finisher, (f) plumber, (g) carpenter, (h) cabinet maker, (i) plasterer, (j) office machine maintenance technician, (k) sheet metal worker, (l) machinist, (m) welder, (n) refrigeration and air conditioning technician, etc. Within three or four years, the work experience programme should have developed to the point that students will become heavily involved in the construction of farm buildings and other minor structures. In

time, students should acquire the technical competence which would enable them to participate extensively in the construction of major buildings and their furnishings.

11. Model or Pilot Industrial Enterprises. Agricultural and other indigenous materials should be exploited in the development and operation of model industrial plants designed to encourage the kinds of technical advancements which must occur as progress in agriculture is achieved. Students should be involved in the planning, construction, operation, evaluation and improvement of such plants. The following are examples of pilot plants which offer interesting possibilities: (a) clay products plant (production of brick, tile, and ceramic artifacts for household use), (b) cabinet and millwork establishment (production of cabinets, sash and doors, laboratory and school furniture, etc.), (c) broom and brush factory, (d) farm implement plant, (e) textile mill (production of yarn and cloth from ingenous fibers), (f) tannery and leather goods plant, (g) plant for production of clothing (school uniforms particularly), (h) crafts shop (handicraft production: weaving, ceramics, rafia, leather, wood andwood sculpturing; art metal and ornamental iron, fabric dying, etc.), (i) tool factory (production of inexpensive hand tools, wooden handles, etc.).

12. Teaching, Research and Extension. In addition to the practice teaching and internship experience to be required of prospective teachers and agriculturists respectively, advanced students should be employed on a part-time basis as assistants who participate directly in the execution of the teaching, research and extension functions of the institution. The following are possibilities: (a) assistant teacher in the Experimental School and in the College, (b) part-time teacher of adult classes, (c) laboratory technician, (d) part-time student counselor, (e) assistant librarians, (f) assistant to administrative officers of the institution, etc.

APPENDIX D. CURRICULA

ACADEMIC CREDIT - HOURLY BASIS
(TENTATIVE)

Degree Program:

Class Hours (Lecture and Recitation Courses) 1 hr. class/week = 1 credit hr.

Class Hours (Laboratory Work - Science) 2 hr. class/week = 1 credit hr.

Class Hours (Shop and Construction and Agr. Field) 3 hrs. class/week = 1 credit hr.

Class Hours (Physical Education) 3 class hr./week = 1 credit hr.

Certificate Program:

Class Hours (Lecture and Recitation)
Terms 1 & 2 - English and Mathematics - 1 1/2 class hr./week = 1 credit hr.
Terms 3 & 4 - English and Mathematics - 1 class hr./week = 1 credit hr.
Other courses - 1 class hr./week = 1 credit hr.

Class Hours (Laboratory Work - Science) 2 class hr./week = 1 credit hr.

Class Hours (Shop & Construction or Agr. Field) 3 hr. class/week = 1 credit hr.

Terms - Three terms of approximately 11 weeks each per year starting about October 1 (e.g., October 1 - December 15; January 5 - March 20; April 5 - June 20).

CURRICULUM (TENTATIVE)
OF
DEGREE PROGRAM IN AGRICULTURE

COURSE NO.	TITLE	TERM CREDIT HOURS
FIRST YEAR		
Rhet. 100-102	English Rhetoric	9
Math. 100-102	General Mathematics	9
Hist. 100-102	History of Civilization	9
Bot. 100	General Botany	5
Zoo. 100	General Zoology	5
Eng. 100	Engineering Shop	8
Agr. 100	Advancements of Agriculture	2
Hyg. 100	Health	2
P. E. 100-102	Physical Education	3
		52
SECOND YEAR		
Rhet. 200	English Composition	3
Spch. 100	Effective Speaking	6
Chem. 100-102	General Chemistry	12
Zoo. 201	Vertebrate Physiology	5
Agron. 201	Soils and Plant Nutrition	6
Agron. 200	Crop Production	12
Eng. 200	Automotive Mechanics	6
P. E. 200-202	Physical Education	3
		53
THIRD YEAR		
Chem. 303	Agriculture Biochemistry	12
Econ. 100	General Economics	6
Gen. 200	Applied Genetics	6
Pol. Sci. 200	Government	6
F. A. 200	Fine Arts and Crafts	3
Agr. Ec. 200-201	Farm Records, Management	9
An. Sci. 201	Animal Nutrition and Feeding	5
Hort. 200	Horticultural Annuals	4
		51
FOURTH YEAR		
Lit. 200-201	Literature	6
Phys. 100	Introductory Physics	6
Agr. Ec. 300	Marketing Agricultural Products	4
An. Sci. 200	Livestock Management	6
Pl. Path. 200	Plant Protection	4
Agr. Eng. 300	Drainage and Irrigation	4
F. T. 300	Elementary Food Technology	4
R. Soc. 100	Rural Sociology and Extension	6
	Electives	9
		49
TOTAL CREDIT HOURS REQUIRED		196

DEGREE PROGRAM IN EDUCATION (TENTATIVE)

COURSE NO.	TITLE	TERM CREDIT HOURS
FIRST YEAR		
Rhet. 100-102	English Rhetoric	9
Math. 100-102	General Mathematics	9
Hist. 100-102	History of Civilization	9
Bot. 100	General Botany	5
Zoo. 100	General Zoology	5
Eng. 100	Engineering Shop	8
Agr. 100	Advancements of Agriculture	2
Hyg. 100	Health	2
P. E. 100-102	Physical Education	3
		52
SECOND YEAR		
Rhet. 200	English Composition	3
Spch. 100	Effective Speaking	6
Chem. 100-102	General Chemistry	12
Zoo. 201	Vertebrate Physiology	5
Econ. 100	General Economics	6
Pol. Sci. 200	Government	3
Educ. 100	Principles of Primary Education	3
Agron. 202	Soils and Crops	9
P. E. 200-202	Physical Education	3
		50
THIRD YEAR		
Lit. 200-201	Modern Literature	6
Soc. 100	General Sociology	4
Nutr. 100	Human Nutrition	6
Educ. 200	Principles of Secondary Education	6
F. A. 100	Fine Arts and Crafts	3
Psych. 100	Educational Psychology	6
An. Sci. 203	Livestock Management	4
	Electives in Major	15
		50
FOURTH YEAR		
Phys. 100	Introductory Physics	6
Pr. Teach. 400-401	Practice Teaching	9
Sem. 402	Seminar on Teaching	3
	Electives in Major	32
		50
TOTAL CREDIT HOURS REQUIRED		196

DEGREE PROGRAM IN EDUCATION
HOME ECONOMICS (TENTATIVE)

COURSE NO.	TITLE	TERM CREDIT HOURS
FIRST YEAR		
Rhet. 100-102	English Rhetoric	9
Math. 100-102	General Mathematics	9
Hist. 100-102	History of Civilization	9
Bot. 100	General Botany	5
Zoo. 100	General Zoology	5
H. Ec. 100-102	Clothing	4
H. Ec. 103-104	Foods and Nutrition	4
Hyg. 100	Health	2
P. E. 110-112	Physical Education	3
		50
SECOND YEAR		
Rhet. 200	English Composition	3
Spch. 100	Effective Speaking	6
Chem. 100-102	General Chemistry	12
Zoo. 201	Vertebrate Physiology	5
Econ. 100	General Economics	6
Pol. Sci. 200	Government	3
Educ. 100	Principles of Education	3
H. Ec. 110-111	Child and Family	6
Agr. 101	Agr. for Home Economists	3
P. E. 210-212	Physical Education	3
		50
THIRD YEAR		
Lit. 200-201	Modern Literature	6
Soc. 100	General Sociology	6
Nutr. 100	Human Nutrition	4
Educ. 200	Principles of Secondary Education	6
F. A. 100	Fine Arts and Crafts	3
Psych. 100	Educational Psychology	6
	Electives in Home Ec.	15
		50
FOURTH YEAR		
Phys.	Introductory Physics	6
Pr. Teach.	Practice Teaching	9
Sem.	Seminar in Teaching	3
	Electives in Home Ec.	32
		50
TOTAL CREDIT HOURS REQUIRED		196

CERTIFICATE PROGRAM IN AGRICULTURE (TENTATIVE)
(TWO YEARS)

COURSE NO.	TITLE	TERM CREDIT HOURS
FIRST YEAR		
Rhet. 1-3	English	10
Math. 1-3	Basic Mathematics	10
Agron. 1	Soils (Chem. and Geol.)	4
Hort. 1	Horticultural Crops	4
Agron. 2	Tree Crops and Grains	4
Shop 1-2	Carpentry and Masonry	10
P. E. 1-3	Physical Education and Health	2
(Work	Work Program	0)
		50
SECOND YEAR		
Rhet. 4	English	3
Hist. 1	Modern History	3
Agr. Ec. 1	Agricultural Economics	7
Agr. Eng.	Farm Equipment	3
An. Sci. 1-2	Animal Feeding and Management	8
Chem. 1	Chemistry of Foods, Feeds, etc.	10
Pl. Prot. 1	Plant Protection (Ent., Pl. Path.)	3
Shop 4-5	Automotive Mechanics	8
Shop 6	Construction Trades	6
P. E. 4-6	Physical Education	2
(Work	Work Program	0)
		53

(95 certificate credit hours required)

CERTIFICATE PROGRAM IN HOME SCIENCE (TENTATIVE)
(TWO YEARS)

COURSE NO.	TITLE	TERM CREDIT HOURS
FIRST YEAR		
Rhet. 1-3	English	10
Math. 1-3	Basic Mathematics	10
Zoo. 1	Human Physiology	3
H. Ec. 1-3	Foods and Nutrition	6
H. Ec. 4-6	Textiles and Clothing	9
H. Ec. 10-12	Home Ec. Practice	9
P. E. 10-12	Physical Education and Health	2
		49
SECOND YEAR		
Rhet. 4	English	3
Hist. 1	Modern History	3
Zoo. 1	Human Disease	3
Spch. 1	Speech	3
F. A. 1	Arts and Crafts	2
Econ. 2	Business Economics	3
H. Ec. 7-8	Child Care and the Family	14
H. Ec. 9-10	Practical Nursing	10
P. E. 13-15	Physical Education	2
	Electives	8
		51

(95 certificate credit hours required)

CERTIFICATE PROGRAM IN TRADES AND INDUSTRY (TENTATIVE)
(TWO YEARS)

COURSE NO.	TITLE	TERM CREDIT HOURS
FIRST YEAR		
Rhet. 1-3	English	10
Math. 1-3	Basic Mathematics	10
Agron. 1	Soils (Chem. and Geol.)	4
Hort. 1	Horticultural Crops	4
Agron. 2	Tree Crops and Grains	4
Shop 1-2	Carpentry and Masonry	10
P. E. 1-3	Physical Education and Health	2
(Work	Work Program	0)
		50
SECOND YEAR		
Rhet. 4	English	3
Hist. 1	Modern History	3
Spch. 1	Speech	3
Econ. 1	Business Economics	3
Shop 10	Applied Math and Drafting	6
Shop 4-5	Automotive Mechanics	8
Shop 6-8	Construction Trades	22
P. E. 4-6	Physical Education	2
		50

(95 certificate credit hours required)

APPENDIX E

NJALA UNIVERSITY COLLEGE

HANDBOOK FOR PROSPECTIVE STUDENTS
1964-65 SESSION

Njala University College will open its doors to its first students in September of 1964. This new degree-granting institution will become a constituent member of the presently-contemplated University of Sierra Leone when the latter is established.

MISSION OF THE COLLEGE

Njala University College is heavily committed to the exploitation of the most rigorous and scholarly endeavour in the pursuit of practical agricultural and related problems which confront Sierra Leone and her people. The accomplishment of its larger mission dictates that the College be multipurpose in character and that its programmes be varied and extensive. Among its major functions are the following:

1. Educate young people in the field of agriculture and home economics and in the sciences and technical pursuits related thereto.

2. Conduct the basic and applied research so necessary to bring about substantial increases in both the quantity and quality of the agricultural production of Sierra Leone. Through research and experimentation, develop and demonstrate improved agricultural products as well as methods of production, processing, distribution, and utilization.

3. Disseminate the knowledge gained from research and experimentation to all who can make use of such information.

4. Prepare, at the degree level, teachers of agriculture, home economics, and the related sciences.

With agriculture central in its programmes of instruction, research, and extension, "The College will, in every manner possible within its resources, assist in advancing the educational, economic, social, cultural, and ethical standards of the people of Sierra Leone and will attempt to improve the health and general welfare of the whole population."*

ORIGIN OF THE COLLEGE

Njala for many years has been known as a major centre for agricultural instruction, research, and extension work as well as teacher education.

* The Charter, Njala University College.

The Njala Agricultural Experiment Station, established in 1910, has conducted extensive studies of soils, varieties of tropical crops, poultry and swine, plant and animal diseases, insects and pests, etc. A programme to prepare teachers for Protectorate Village Schools was initiated at Njala in 1919. Formal instruction for agricultural apprentices began in 1924. The world economic depression of the late 1920's and the 1930's interrupted instruction.

With a staff of two, and with facilities consisting of twelve small mud and wattle buildings, the Njala Training College was opened in 1939. Twenty-five students were enrolled, ten in agriculture and fifteen in education. Growth, expansion, and improvement since 1939 have been continuous. Today there is a modern campus with permanent concrete buildings for instruction, food service and housing for 190 students and a staff of 20.

As a result of the interest of the Government of Sierra Leone in improvements sought in both agriculture and education, a survey team from the University of Illinois, under a U. S. AID Contract, was engaged to conduct a study of agriculture and education in Sierra Leone. Acting upon the recommendations included in the report of the study conducted during February and March of 1963, Government made the decision to establish a major collegiate institution at Njala.

In August of 1963, the University of Illinois entered into contract with the United States Agency for International Development, which calls for assistance in the development of Njala University College.

FACILITIES

Njala University College is located adjacent to the beautiful River Taia, 130 miles east of Freetown, on the main road connecting the Capital City and Bo, eleven miles from Taiama and eight miles from Mano. The land allocated to the College at Njala includes the 30 acre campus of the Njala Training College and the 780 acres of the Agricultural and the Oil Palm Research Stations. In addition, the land, laboratories and other improvements of the Rice Research Station at Rokupr are included as a part of the College research facility.

All of the facilities of the three institutions at Njala (the classroom buildings, laboratories, dining halls, residence halls, staff houses, workshops and farm buildings) have been assigned to and will be utilized by Njala University College. Many of the existing structures are modern, well-constructed buildings, and these will be incorporated into a completely modern campus which is now in the planning stage.

A request has been made to Government for the acquisition of a further 2,250 acres of land contiguous to the present holdings at Njala for the main purpose of developing experimental farms.

By September of 1964, U. S. AID funds will have provided new instructional and research facilities to add quite substantially to those presently at Njala. These new facilities will include more than 7,000 new books for the library; new scientific equipment for the chemistry, physics, botany, zoology,

soil science, home economics, and agricultural engineering laboratories; shop tools and technical equipment for the maintenance and instructional shops, for the student work programme, and for improved agricultural and food processing pursuits. In the meantime, it is anticipated that the Sierra Leone Government will have made substantial grants for such new building and facilities as a new library building, new student centre and dining hall, science building, enlarged and improved power plant and water system, additional student and staff housing, etc.

Thus with the careful administration and the pooling of Sierra Leone and U. S. funds allocated to Njala University College, and with full and effective utilization of facilities presently at Njala, substantial progress should be made toward the development of a modern, attractive, functional campus during the first year of operation.

STAFF

A Sierra Leonean, and former member of faculty at Fourah Bay College, Dr. S. T. Matturi, was appointed Principal of Njala University College on June 1, 1963. Mr. H. M. Lynch-Shyllon, M.A. (Durham) was appointed Registrar on October 18, 1963. By September of 1964 it is hoped that three additional administrative officers, all Sierra Leonean, and 20 academic staff members will have been appointed and posted at Njala. The technical, clerical, and agricultural workers at Njala will continue, but as employees of the College.

Since completion of the survey in March of 1963, administrative officers and faculty of the University of Illinois have worked closely with Sierra Leone personnel on plans for Njala University College and have participated in the preparation of future staff members for the College. The Principal conferred continuously with key personnel on the Illinois campus during July of 1963. Mr. Lynch-Shyllon will be spending three months at Illinois to prepare for his work as Registrar at Njala. From five to ten Sierra Leoneans will be at the University of Illinois during each of the next several years preparing for staff positions at Njala University College.

Two University of Illinois professors: Drs. Karl Gardner and M. Ray Karnes, Associate Dean of Agriculture and Chairman of Vocational and Technical Education, respectively, have been at Njala since October of 1963, working closely with Dr. Matturi on developmental plans for the College. By September of 1964, seven University of Illinois faculty members will be at Njala to work alongside the University College employees.

It is intended that the academic staff should be of an international character and that Sierra Leoneans with sound basic qualifications will be encouraged to undertake advanced work either within the College or abroad to enable them to take on research and teaching appointments.

FACULTIES AND DEPARTMENTS

I. Faculty of Agriculture

1. Department of Plant Sciences
2. Department of Animal Sciences
3. Department of Agricultural Economics and Co-operation

4. Department of Agricultural Engineering
5. Department of Home Economics
6. Department of Agricultural and Home Economics Extension

II. Faculty of Education

1. Department of Teacher Education - Secondary, Primary
2. Department of Extension

III. Faculty of Arts and Sciences

1. Department of Biological Sciences - Botany, Zoology, Entomology, etc.
2. Department of Physical Sciences - Mathematics, Physics, Chemistry
3. Department of Social Sciences - History, Economics, Sociology, etc.

INSTRUCTIONAL PROGRAMMES

Njala University College will offer instructional programmes at two levels of study: four-year degree courses and two-year certificate courses. A three-year diploma course in agriculture is anticipated at a later date.

Degree Course in Agriculture. Upon satisfactory completion of the four-year degree course in agriculture, the degree Bachelor of Science in Agriculture will be awarded by the University of Sierra Leone. This will be either a pass or honours degree, depending upon the quality of the performance of the individual student. The degree course prepares the student for a wide variety of agricultural and agriculturally-related occupations: agricultural extension work in colleges or in Government Ministries serving tropical agriculture within Sierra Leone or outside the country; research and technical positions in educational institutions, private businesses, industries, and in Government; teaching of technical agriculture at the several levels; work with cooperatives; and numerous other positions for which a basic preparation in agriculture and the related sciences is valuable.

The degree course in agriculture is much more than a narrow technical preparation in this field. Fully fifty percent of instructional time is devoted to study in the biological, physical, and social sciences, and to English, speech, literature, and the fine arts.

Degree Course in Education. The four-year course leading to the degree of Bachelor of Science or Bachelor of Arts in Education is quite different from the various certificate and diploma courses in education now available in Sierra Leone. The major purpose of this new degree course is to prepare young people for teaching at advanced levels in the secondary school. Each prospective teacher receives a broad fundamental education, with study in each of the following: the basic biological, physical, and social sciences, including history and economics; English, including grammar, composition, and literature; agriculture, and in case of women, home economics; mathematics; fine arts. In addition to this broad preparation, which provides a fundamental education and also prepares for general teaching in the lower forms of the secondary school, each teacher is required to

specialize in one or more broad fields of study in which Njala University College will develop major strength and thus prepare for advanced teaching in one or possibly two of the following: agriculture, home economics, biological science, chemistry.

A limited number of professional subjects in education, along with rather extensive observation and practice teaching, constitutes the professional phase of the degree course for teachers.

The specialization available in home economics will be of particular interest to young women. This specialization, along with the basic education obtained, prepares them not only for teaching but as well for such positions as dietitians or directors of food service programmes in schools, colleges, hospitals, and other institutions; for work in maternity and child care centres; for the design, construction, and retailing of clothing; for designing textiles and planning artistic home furnishings; and for numerous other occupations.

Those who prepare for teaching, whether specializing in agriculture, home economics, or in one of the sciences or other fields of study related thereto, also have open to them a wide variety of other rewarding employment opportunities in a rapidly developing society.

CERTIFICATE COURSES IN AGRICULTURE, HOME ECONOMICS, AND TRADES AND INDUSTRIES

While the two-year certificate programmes require that students pursue serious study in the basic fields of study and that they obtain a broad preparation, heavy emphasis is placed upon the applied, practical side. Approximately one-third of total instructional time is devoted to formal study in such basic areas as English, mathematics, and the physical and biological sciences; one-third to pursuit of applied technical subjects in the area of specialization, and one-third to supervised work and informal instruction in that field.

The two-year course leading to the Certificate in Agriculture prepares the student for such positions as agricultural instructor in the service of Government, for useful work in agricultural businesses, and for supervisory positions on larger plantations, or for establishing himself as a farmer who employs the most modern and effective agricultural methods.

Women who complete the two-year course leading to the Certificate in Home Economics will be prepared to provide the leadership necessary for improving their home communities as well as the general status of women in the country. They will be well equipped to better the homes and home-life of the community in the matter of nutrition, sanitation, infant and child care, home furnishings, clothing, home nursing, and general family education. They will also be prepared for jobs in the textile and clothing business and industry, for food service positions, and for practical nursing.

The programme of study pursued by students who earn the Certificate in Trades and Industry is designed to prepare a corps of workers in the technical pursuits of an industrial nature who can perform the skilled work which is required to advance agricultural production, to improve the storage processing and

marketing of that production, and to improve the home environment of the rural people involved in agriculture. Intensive instruction will be given in such practical pursuits as: automotive and farm equipment maintenance; the construction trades; design, construction operation, and maintenance of food processing equipment; electrical wiring; plumbing and sanitation; irrigation and drainage; construction and maintenance of simple water supply systems; etc. The services of men so prepared should be in high demand in a rapidly developing country.

ADMISSION REQUIREMENTS

Programmes have been established in direct response to the many and varied agricultural and educational problems which confront the people of Sierra Leone. Recognition has been afforded the fact that what is urgently needed if these problems are to be solved is educated manpower. There is much work to be performed, and this requires people motivated by a multiplicity of interests and aspirations and prepared adequately for the many and varied tasks. Therefore, there should be no one rigid set of entrance requirements which denies admission to all but a select few. While certain programmes in the College are open only to candidates of exceptionally high qualifications, other programmes are available to mature individuals who present less in the way of prior preparation. In any event, provision is made for considering for admission, at least on a trial basis, the student of exceptionally high aptitude who may not possess the formal certificates normally anticipated.

Requirements for Admission to Degree Courses

1. West African School Certificate, with credits in English, Mathematics or a science subject, and two or three other subjects.

2. General Certificate of Education at Ordinary Level in four or five subjects, including English and either Mathematics or a Science Subject.

3. G.C.E. "A" Level in two subjects plus two or three "O" Level passes.

4. Higher School Certificate with two passes at Principal Standard.

5. In the exceptional case, evidence of the equivalent of one or more of the above certificates as established by a high mark on a comprehensive achievement examination, along with a score in the upper quarter on a standardized aptitude test.

6. All prospective candidates will be required to attend an interview.

Requirements for Admission to Certificate Courses

1. Satisfactory completion of Form III.
2. A passing grade on an entrance examination, along with a score in the upper half on a standardized aptitude test.
3. All prospective candidates will be required to attend an interview.
4. Minimum age of 16 years.

Provision for Transferring From Degree to Certificate Courses, and Vice Versa

A student who enters a degree course may, upon petition and after review of his case, be permitted to transfer to a certificate course. On the other hand, a student who performs at an exceptionally high level in a certificate programme may petition for admission to a degree course, and, after review of his case, may be admitted. He will necessarily lose some credits as the transfer is made.

FEES

I. Degree Courses

1. Tuition Fees	£50 per session
2. Residence Fees	£90 per session
3. Other Fees	
i) Students' Union	£ 2 per session
ii) Library	£ 2 " "
iii) Registration	£ 1 " "
iv) Sports and extracurricula activities	£ 2 " "

II. Certificate Courses

1. Tuition Fees	£20 per session
2. Residence Fees	£90 per session
3. Other Fees	
i) Students' Union	£ 2 per session
ii) Library	£ 2 " "
iii) Registration	£ 1 " "
iv) Sports and extracurricula activities	£ 2 " "

The above fees do not include books, stationery, laundry, and other personal expenses.

All fees are payable in advance.

CAUTION MONEY

A deposit of £3 caution money will be required from each student to be held against damage to or loss of College property. Students using Science laboratories may be required to deposit an extra £5 against loss of or malicious damage to laboratory equipment supplied.

STUDENT EMPLOYMENT PROGRAMME. The work programme involving every student at Njala is thoroughly consistent with the purposes of Njala University College and with the underlying reasons for its establishment. This is an institution in which a wholesome attitude toward work is apparent, and in which the dignity of useful work and respect for the individual worker is fostered.

Aside from emphasizing the dignity of labour the student employment programme serves several important purposes:

1. Enables the student to earn at least a part of the expense involved in obtaining an education.
2. Provides practical experiences through which the student develops skill in applying the principles and techniques studied in formal classes, thus affording the student an advantage when he seeks full-time employment.
3. Accomplishes some of the important and very necessary work required to operate and maintain the institution.

There will hardly be an activity conducted by the College in which there will not be many opportunities for student employment. The following are only illustrative of such opportunities:

1. Minor construction of buildings and other physical facilities.
2. Maintenance of buildings, experimental apparatus, machinery and farm equipment, vehicles, tools, etc.
3. Every conceivable aspect of conducting agricultural experiments and demonstrations, both plant and animal.
4. Designing, constructing, operating, and maintaining model or demonstration plants and facilities for processing agricultural products.
5. Office and clerical work.
6. Institutional food service programme (affording experience especially valuable to students specializing in home economics).

SCHOLARSHIPS. The worthy student may anticipate that a scholarship will be made available. A scholarship programme, supported primarily from Government grants but to some extent by business and industrial enterprises of the country, has been developed in such a manner to afford financial assistance to a sizable proportion of the full-time students. Receiving a scholarship does not, however, render a student ineligible to participate in the student employment programme.

For additional information about Njala University College, and for admission application forms, write:

The Registrar
Njala University College
Njala via Mano, Sierra Leone.

APPENDIX F

PERSONAL EMOLUMENTS BREAK-UP*

I. ADMINISTRATIVE STAFF

Principal
Registrar
Bursar
Librarian
Administrative Secretary

II. INSTRUCTIONAL STAFF

1. Collegiate (A.) AGRICULTURE
Director of Research (Senior Lecturer or Professor)
Head of Animal Sciences (Professor)
Head of Plant Sciences (Professor)
Agronomists (2) (Lecturer or Senior Lecturer)
Agricultural Economist (Lecturer or Senior Lecturer)
Plant Physiologist (Lecturer or Senior Lecturer)
Agricultural Engineer (Lecturer)
Entomologist (Lecturer)
Horticulturist (Lecturer)
Forestry Researcher (Lecturer)
Plant Pathologist (Lecturer)
Home Scientist (Lecturer)

(B.) EDUCATION
Director of Teacher Education (Senior Lecturer or Professor
Lecturers in Education (2)

(C) BASIC SCIENCES & GENERAL STUDIES
Lecturers (5)
English, Mathematics, Biology, Chemistry and History

2. Experimental School (Primary only)
10 Grade Teachers (Kingsley and Min. Ed. Scales)
4 Kindergarten and Nursery Teachers (Kingsley and Min. Ed. Scales)

III. TECHNICAL STAFF
Director of Physical Plant (Maintenance Superintendent)
Chief Technician - Agricultural Engineering Laboratory (Lecturer Scale)
Chief Technician - Research and Teaching Laboratories (Lecturer Scale)
Senior Technician - (£752 as at F. B. C.)
Laboratory Assistants (2) (£684 as at F. B. C.)

IV. CLERICAL STAFF
Chief Clerk £626
Clerks (4) @ £400
Shorthand Typists (4) @ £400
Temporary Clerical Assistants (2) @ £201

* For year April 1, 1964 - March 31, 1965.

PERSONAL EMOLUMENTS BREAK-UP*

I. ADMINISTRATIVE STAFF	
Principal	£3,000
Registrar	1,950
Bursar	1,950
Librarian	1,950
Administrative Secretary	950
	9,800
II. Instructional Staff	
Director of Teacher Education	2,850
" " Research	2,850
" " Physical Plant	1,950
Head of Animal Sciences	2,850
" " Plant "	2,850
2 Agronomists @ £1,500	3,000
Agricultural Economist	1,500
Plant Physiologist	1,500
Agriclutural Engineer	1,500
Entomologist	1,500
Forestry Research Scientist	1,500
Horticulturist	1,500
Plant Pathologist	1,500
Home Scientist	1,200
Agricultural Extension Specialist	1,200
5 Lecturers in Basic Sciences and General Studies (English, Mathematics, Botany, Chemistry and History @ £1,200 each)	6,000
2 Lecturers in Education	2,400
	£37,650
Practice School Primary	7,500
	£45,150
III. Technical Staff	
Chief Technician Ag. Engineering	1,200
" " Science Laboratories	1,200
Senior Technician	752
2 Laboratory Assistants	684
	3,836
IV. Clerical Staff	
Chief Clerk	£ 626
4 Clerks @ £400	1,600
4 Shorthand Typists	1,600
2 Temporary Clerical Assistants	402
	4,228

* For year April 1, 1964 - March 31, 1965.

APPENDIX G

THE AGRICULTURAL PROGRAMME AT NJALA UNIVERSITY COLLEGE

I. INTRODUCTION

Throughout Sierra Leone there is the conviction that Agriculture, the basic occupation of perhaps 85% of the population, should advance at a more rapid pace. It is obvious that only through such a development can the increasing population be more adequately nourished and, in addition, some surplus of agricultural products be exported to support the imports of commodities not produced in Sierra Leone.

Njala University College was established in 1963 to help the country achieve a more productive Agriculture by bringing together the talents of specialists who will examine the problems and diligently seek to solve them.

Immediately, the College was faced by a shortage of well-educated and adequately trained agricultural scientists and technicians in Sierra Leone. Probably as a result of short sightedness on the part of both the youth of the country and also the Government, very few of the large number of students sent overseas for academic work studied any phase of the broad field of Agriculture.

Quite clearly then, the preparation of ever more skilled specialists, through the provision of collegiate instruction, stands as the first order of priority at Njala.

II. AGRICULTURAL INSTRUCTION

1. The College must assemble a highly competent academic staff to assure high calibre instruction. To help overcome the deficiency of trained Sierra Leoneans the University of Illinois, operating under a United States Government AID program, will provide certain counterpart staff to assist less-experienced African staff. In addition, talent from other sources will be actively sought.

   Certain of the Sierra Leonean staff will be sent elsewhere for further training under United States, and perhaps other, technical assistance programmes. Many of these staff members will be sent to the University of Illinois as part of the project.

2. Students will be selected carefully by the College with the most capable entering the four-year programme leading to the Bachelor of Science (B.Sc.) degree in Agriculture, and with those who have had a less rigourous academic background following the two-year Certificate curriculum. The four-year degree course in Agriculture prepares the student for a wide variety of occupations. These include: agricultural extension work in colleges or Government ministries serving tropical agriculture within Sierra Leone or outside the country; research and technical positions in educational

institutions, in private businesses and industries and in Government; teaching of technical agriculture at the several levels of instruction; plantation and farm management; work with cooperatives; and numerous other positions where a training in basic biological science or general education is valuable.

The curriculum in Agriculture is not a narrow technical training in spite of the agricultural emphasis. Fully 50 percent of the work involves study in the biological, physical, and social sciences as well as in English grammer, speech, literature and the fine arts. (See Appendix D - Curricula.)

The two-year course of study for the Certificate in Agriculture prepares the student for positions such as agricultural instructor in the service of the Government; and for useful work in agricultural businesses and on farms and plantations. This program includes, in addition to a heavy emphasis on agricultural subjects, intensive instruction and practice in such practical areas as carpentry, wood-working, masonry, plumbing, automotive mechanics, sheet metal work, electrical wiring, and painting. (See Appendix D - Curricula.)

5. While the degree and certificate students in agriculture will receive more concentrated instruction in agricultural subjects such as soils, crops, animal husbandry, agricultural engineering, and agricultural economics, all students including those in home economics and teacher education will receive certain basic instruction in agriculture.

6. High standards of instruction must be maintained along with excellence of student performance. Libraries, laboratories and shops are being developed to make it possible for students and instructors to perform maximally.

III. RESEARCH IN AGRICULTURE

Academic instruction of students in residence at Njala and extension work depend upon facts determined from research conducted locally and over the world. As in the case of the instructional program a capable staff and adequate facilities and funds are essential to create the climate conducive to good research.

Since funds and good scientists will always be limiting factors here and elsewhere, it is necessary to at least attempt to develop priorities covering the most essential studies. Such an attempt is made for each area of agricultural study.

The results of research will be published in recognized journals, used in instruction, put into practice at Njala, and described to producers through all possible extension media.

A. Agronomic Studies - Soils

The greatest single natural resource of Sierra Leone is its soil. It is a renewable resource as contrasted with iron ore, chromium, and diamonds which when mined usually leave the country.

While there are fertile soils in Sierra Leone, such as the Scarcies tidal mangrove swamps, the coastal riverain grasslands, the "boli" lands, and the low-lying alluvial patches near rivers, much of the soil is relatively low in those chemical and organic properties needed for satisfactory yields of annual crops.

So far as is presently known, Sierra Leone has few, if any, deposits of those compounds essential for the manufacture of the fertilizers needed to improve the soils and hence crop yields.

1. Obviously, then, one of the principal concerns of the country must be to encourage those cultural and management practices which will retain what soil fertility there is and which will reduce erosion and over-cultivation. This, of necessity bears a high priority.

   Such questions arise as: What degree of slope precludes the growing of cultivated crops on the various soil types? Is the system of "shifting cultivation" and "bush fallowing" presently in use the best basis for the maintenance of soil fertility?

2. Basic to any improvement in the agriculture of Sierra Leone is a rather complete understanding of the soils of the country. Soils studies have been made here and in somewhat similar areas elsewhere. A survey of these studies will be very helpful. Where additional research is needed this will be attacked.

3. The soil research at the Rokupr Rice Research Station is already forming a basis for understanding the pecularities of the soils of the tideland mangrove swamps and the proper cultivation of these highly productive areas. These and other soil studies at Rokupr will be promoted so that maximum use of the Scarcies and other similar areas is made possible. The work at Rokupr will be fully integrated with that at Njala.

4. In general, the soils research will include the responses of different soils to fallowing practices, fertilizer additions, irrigation and drainage, etc. as measured by crop yields, degree of erosion, and the maintenance and improvement of the physical and chemical properties of the soil.

B. CROPS - (Including field, tree and horticultural crops)

1. Studies will be continued and augmented in the matter of securing crops and crop varieties most suitable for Sierra Leone soils of the various types. Practically every food crop except the oil palm has

been introduced into West Africa. These crops have had to be tested under Sierra Leone's several climatic and soil conditions. Such studies must continue under the College's supervision and include maize, sugar cane, improved upland rice varieties, soybeans, numerous grasses and fiber crops.

2. In cooperation with agricultural economists, cost accounting methods will be applied to determine the relative profitability of various crops and the economy of the several practices employed in their culture.

3. Improved strains of crops will be brought about by crop breeding studies conducted under the supervision of the College.

4. The diseases of crops will receive continual attention with an alertness for new outbreaks and with studies initiated on prevention, control, genetic resistance, etc.

5. Animal feed crops will be studied in cooperation with the animal husbandry and agricultural economics divisions.

6. Weed control studies must be initiated early. Spear grass and other weed pests are endangering the progress of the floating rice expansion program near the coast.

). LIVESTOCK

The diet of man is improved both as to nutritional quality and as to satisfying properties when it includes meats, eggs, and milk. The high infant mortality of Sierra Leone is related not only to contagious diseases but to inadequacies of the diet. Some of the dietary deficiencies of infants, adolescents, and adults can be corrected by the inclusion of more animal products providing essential proteins, vitamins, minerals, and of course energy. An understanding of the laws of adequate nutrition must be promoted by educational means throughout the land.

Animal husbandry in Sierra Leone is hampered by climate, by animal disease, by insufficient knowledge of proper husbandry practices, by inadequate feed supplies, and by transportation and marketing shortcomings. Correction of most all of these handicaps is possible, to varying degrees.

Plans (in order of implementation).

1. Particular emphasis will be placed on poultry improvement utilizing the basic work at the Newton Station and elsewhere. Propagation of improved breeding stock will be continued with an increased effort to disseminate the stock to many more areas.

2. Egg marketing problems will require the attention of the poultry and agricultural economics specialists.

3. Farm flocks must be studied as well as specialized poultry farms; and economic housing must be examined in cooperation with the Agricultural Engineering Division of the College.

4. The present breed improvement program in swine will be intensified and an attempt made to relate it to practical husbandry in Sierra Leone. Housing studies of a practical nature will be inaugurated for swine with the aid of the Agricultural Engineering Division.

5. If more poultry and swine are to be raised, it is essential that rations utilizing more Sierra Leone - produced feeds be studied. Agronomists, economists and animal husbandmen will pool their efforts in such essential studies. Locally produced feeds obtained from fish canning, rice processing, palm kernel processing operations, etc. will also be included in rations.

6. The present relatively heavy population of goats and sheep in Sierra Leone indicates the gain to the country which would accrue from any advances in breeding and management. Consideration could be given to studies of various breeds, strains, and crosses as to growth rate, reproductive rate, meat properties, disease resistance, and possibly, in goats, the milk-yielding capacities.

7. The Ndama cow has been studied in Nigerian research, and perhaps elsewhere, but more information is needed as to the potential for growth under improved environments. Crossing with more productive breeds followed by studies of disease resistance, etc. may be indicated.

8. Research may be able to provide more adequate quantities of suitable pasturage and other feed for herbivorous animals throughout the year and particularly in the dry season.

D. AGRICULTURAL ECONOMICS

The economic principles of all businesses, even subsistence agriculture, must receive consideration if improvement is sought. Perhaps the greatest single weakness in Sierra Leone agriculture is an inadequate appreciation of the economics of food production and marketing.

The College at Njala must become qualified to make recommendations pertaining to land tenure and leasing, general rural development, management of cooperatives, the marketing procedures most suitable for the various areas and crops of the country, optimum production practices, etc. All these demand the participation of agricultural economists.

Plans

1. Studies of the most efficient use of land are seriously needed in Sierra Leone. Whether to encourage rice production or tree crops such as coffee, cocoa, oil palms, citrus, rubber, lumber, etc. in a given area is of paramount importance.

2. Methods of obtaining production cost data are needed, at the very least on a comparative labor income basis for the various crops.

3. Studies of agricultural credit, in cooperation with programs of the Ministry of Natural Resources and the Cooperative Department should lead to improvement in this serious problem. Family finances need to be surveyed to learn about cash income, expenditures, savings methods, and the like.

4. Present grain storage and processing methods apparently cry out for suggestions from qualified technical experts.

5. There is no question but that an organized attack on transportation and marketing problems could benefit the producers of eggs, meat, rice and other products.

6. The effect of the land tenure and leasing practices of the country upon future improvement in Agriculture should be examined. (F.A.O. representatives are presently engaged in some studies.)

7. The developing cooperative movement is a fertile area for economic and sociological study.

8. Sociologists must concern themselves with Rural Development in its entirety. (The Ministry of Social Welfare is operating in this arena.)

9. An agricultural census would be valuable although admittedly very difficult to conduct. The amounts of products exported are well documented, but no data are available as to the acreage of land being cropped, the acre yield of the various crops, or the number and yield of animals grown. An AID survey is just being begun, but will need retirement and a continuing survey of some type would be very valuable. Food production data are needed to ascertain true nutritional conditions. The rate of agricultural progress can only be guessed at unless a base line is determined as accurately as is feasible.

E. AGRICULTURAL ENGINEERING

The division of Agricultural Engineering will concern itself with instruction, research, and extension pertaining to a wide variety of subjects. This is in spite of a possible snap judgement that Sierra Leone's primitive agriculture is not far enough advanced to benefit from engineering immediately.

Large scale agricultural production machinery appears most useful in the flat, tree-free areas of the boli lands, the grasslands, etc., rather than in the upland bush country. Most areas can benefit from practical-sized processing and marketing machinery. (Oil presses, coffee hullers, grain processing machinery, etc.)

Cooperative grouping of farmers can make it possible to use plowing, cultivating, harvesting, and processing machinery of a type which would be impossible on the generally small holdings of individual farmers.

Increased total yields rather than any great degree of labor-saving must remain the prime aim of engineering applications for many years to come. This is so, since there is serious under-employment in both rural and urban areas while food insufficiency is found almost everywhere.

Plans

1. Preparation of laboratory facilities and purchase of equipment for the instruction of degree and certificate students is the first task. Certificate students in Trades and Industries will spend approximately 50% of their class time in learning skills and techniques related to masonry, carpentry, plumbing, electric wiring, metal working, and automotive mechanics. The degree students in agriculture will also spend a considerable though smaller portion of their time in this work.

2. Certain activities in the work program for all students (for income) will involve construction skills and hence the engineering division will be concerned.

3. Investigation should be made of all forms of improved low-cost tools for planting, cultivating, harvesting, and food preparation. Simple man-powered machines suitable for village or cooperative use in processing farm products should be tested. Power machines for processing products are also coming in and must not be ignored.

4. Studies are essential concerning practical methods of providing safe water for villages, sanitary toilet facilities, more durable and more satisfactory huts, better family storage of grains and other foods, etc.

5. Other studies of great importance include improved housing for animals, irrigation and drainage, and soil conservation.

IV. EXTENSION WORK

The proposed program of agricultural and other extension work is briefly described on pages 23 and 24 of the printed report of the University of Illinois Survey Team, "Education and Agricultural Development in Sierra Leone," Government Printing Department, Sierra Leone.

If the agriculture of Sierra Leone is to be improved it will be done by a combination of educational extension methods and Government-sponsored "schemes." A recent report, "Development Plan of the Agricultural Services of Sierra Leone" put out by the Ministry of Natural Resources will be useful in the early planning of the extension program.

The problems facing the extension specialists are those of the Sierra Leone farmer:

1. Illiteracy. With perhaps 90-95% of the population illiterate, some of the most useful extension techniques such as circulars, newspaper releases, etc., are sorely limited in their effectiveness. Illiterates can be reached, however, via the "roadside demonstration."

2. Land tenure system. The fact that agricultural land cannot be purchased, only leased, may act adversely in getting a farmer to improve soil, build livestock facilities, or plant slow maturing trees. It is not likely however, that a chief or other notable could expropriate improved land without serious repercussions. Leases are respected though not very commonly used.

3. Size of holding. Holdings are small and it takes just as much work for an extension man to "convert" 20 farmers with 5 acres each as 20 with 100 acres each. In fact, the smaller farmer is probably harder to "sell". The more responsible chiefs or leaders, if convinced, however, could be influential in promoting progressive methods.

4. Capital problem. It is very difficult for a farmer with no credit rating, nothing much to offer as security, and no basic understanding of the simplest principles of economics to borrow the money needed to start improving his operations. Interest rates are high reflecting, in part, the occasional difficulties in collection.

5. Lack of research. Extension finds itself at a great disadvantage, in fact in a vacuum, when there are insufficient research facts available upon which to base a program of agricultural development. Economic data on proper land utilization, cropping intensities, fertilization techniques, marketing, etc. are all deficient.

6. Primitivism. No one from a Western nation who has not studied primitive agriculture can possibly comprehend in short order how really primitive it can be. It is a subsistence agriculture without the wheel, without any beast of burden, with only 3 tools--the machette, the short-handled hoe, and the rice knife, and with the chicken, the sheep, and the goat as the main domesticated animals. The affluent few have a few head of cattle and the pig is occasionally found. All animals are in a low state of productivity as are most field crops.

7. Traditionalism. Whatever can be said derogatorily about the Sierra Leonean farmers' methods, it should still be noted that few actually starve and this is an accomplishment in a country of relatively poor soils. The malnutrition that exists is often as much the fault of ignorance of the proper nourishment of infants and adolescents as it is a shortage of food; though the latter is also common seasonally. Traditional culture methods will and should be continued until great assurances can be provided that changed methods will pay off.

8. Health as a Deterrent to Advancement. Progress and development depend to a considerable extent upon an energetic approach to problem-solving. Malaria, internal parasites, malnutrition and numerous other diseases are factors to be reckoned with in this respect.

9. Transportation Deficiencies. Moving products to market is a problem over much of the country. The road system is inadequate in all regards although improvements are in progress. Extension work will be impeded somewhat by this road situation.

It is entirely possible that the chiefdom system of goverment may offer an unusual opportunity for the agricultural extension worker to advance his program. If a given chief can be convinced of the merits of a change and the tribal council is also "sold," then the influence they exert may be a great aid in furthering any improved procedures.

Conceivably, short courses of instruction could be offered for chiefs and other influential persons. These could be developed using demonstration and other visual aids methods, possibly at Njala where housing would be available during student vacation periods. Only thoroughly tested agricultural methods would be exhibited since the people cannot afford the luxury of individual experimentation.

Selecting one or two nearby villages at first and focusing improved agricultural techniques or bettered living conditions on the prevailing pattern of life could be one preliminary procedure. The dissemination of improved animal and plant stock coupled with some managerial instructions is another useful step. The advancement of health measures may be of prime importance in gaining the confidence of villagers as well as in improving their productivity as food producers.

There is such a tremendous volume of work to be done that there is small reason for or likelihood of the various agencies of Government and the College coming into any real conflict over jurisdiction. It would be wise, however, for the extension director and the college council to come to an agreement at an early date with Governmental or other agencies relative to spheres of interest and influence. The College should insist on the broadest possible interpretation of educational extension work and start developing that degree of proficiency in the field which assures the confidence and respect of all the people of the Country.

Youth work, in cooperation with home economics extension, is certain to develop, and plans must be made to organize this project. The school system affords a relatively easy entree to the youth sector.

APPENDIX H

PROGRAM IN HOME ECONOMICS

The total program in Home Economics is based on the pressing need in Sierra Leone for improving the caliber of home life and the living conditions in the villages. It also is based on the assumption that the general lot of the women needs upgrading.

It is essential that women assume leadership, as soon as they are qualified in raising standards of sanitation, in improving infant and child care, in elevating the level of understanding of proper nutrition, and in improving the health of the family by all possible means.

Very few Sierra Leonean women are presently able to organize programs in the areas of need mentioned or to do teaching, research, or demonstrational work in these subjects. Preparing women for this large task ranks with the most important objectives of Njala University College.

A. Teaching Program

Both a four-year degree program and a two-year certificate program in Home Economics are being established. The curricula for both courses of study are shown in Appendix D. It will be observed that the home economics subjects include food preparation and nutrition, clothing construction and textiles, infant and child care, home management and improvement, and home nursing. The level of instruction will, of course, be higher in the degree curriculum.

The student will also receive certain basic instruction in agriculture since women in the villages of Sierra Leone are intimately concerned with much of the agricultural work. Agricultural improvement is of vital concern to women and they will in no small measure participate in any changes made.

All students in the College, will receive certain health instruction, but this will be further reinforced in several home economics subjects.

B. Careers

Students will be able to combine studies in basic home economics with subjects in teacher education thus preparing them for teaching home science in secondary schools and in teacher training colleges. Graduates will be needed in the home economics extension program as it grows. Properly prepared graduates would also be of great service in the new programs of the Ministry of Social Welfare.

There is a severe need for dietitians and food service personnel in the hospitals and this need will grow as more medical facilities are developed. As health centers expand, there will be a call for women trained in subjects such as pre-natal and post-natal care as well as in child health, including nutrition. Attention must always be given by the College to the type of training which will best fit the needs of the people of Sierra Leone.

C. Research

1. Nutrition Surveys. These should be run to learn about existing diets, intake levels, food taboos, order of eating within the family, and methods of food preparation. Such surveys also provide a wealth of information about family customs, living conditions, tribal societies, games and recreation, cash incomes, work habits, family health, sanitation, and the like. The U.S. National Institute of Health stands ready to assist in many ways in the conduct of such nutrition surveys. Food intake data are needed to give a continuing index of the changes in the fundamental standard of living--to show progress or the lack of it. The other information mentioned would give not only home economists, but agricultural and other workers many of the facts needed for their improvement programs.

2. Infant and Child Nutrition. The feeding of infants and young children is very often inadequate. This is partly a matter of common ignorance of the simplest rules of nutrition. It is also partly a matter of not having appropriate foods in all seasons and, in addition, not knowing how to use the useful foods at hand. Suitable infant diets need to be developed using various combinations of foods throughout the entire year.

3. Home Improvement. In cooperation with the engineering division, an attempt should be made to improve home planning and construction. Problems of water leakage and rain damage, smoke, sanitation, food storage, etc. need study. Some interest has been shown in the "smokeless cooker" and further examination of its relative practicality is needed.

D. Extension

1. Women's Organizations. Obviously more progress can be made by conducting home economics extension programs through women's groups than in working solely with individuals. The development of these groups should, as elsewhere, include social aspects as well as vocational or technical ones. Music, arts and crafts, and the dance are part of the traditional culture of the people and can be used to organize, entertain and set the stage for improvement plans.

Certain organizations of women are developing at present in Sierra Leone, e.g. Thrift and Credit Societies, and the indications are that women thoroughly enjoy group situations.

2. Health Whoever has access to the homes of the Country will immediately learn of the serious need for health improvement projects. How soon the College will be able to assist in any broad way in this work is not immediately apparent, but every College staff member, in or out of Extension, will find himself compelled to participate in health improvement to some degree.

3. Food Preparation and Nutrition. The obvious need in this field must be met when personnel situations permit.

APPENDIX I

PHASED DEVELOPMENT OF EXPERIMENTAL SCHOOL* (1963-67)

1. The general purposes and characteristics of the proposed Experimental School were set forth in the memorandum of November 15, 1963, from Drs. Matturi, Gardner and Karnes to the Honourable A. Wurie, Minister of Education. The purpose of the present document is to present a general plan for the development of the School over a four year period (1963-67) and to show in somewhat greater detail a plan for the first two years of that period.

2. Assumptions. This plan is based upon the following assumptions:

   a. The numbers of young people seeking education will provide a total enrollment of approximately 1,000 by 1967.

   b. Staffing the Experimental School and Njala University College will be a major problem. By making maximum use of Sierra Leoneans, engaging a limited number of U. S. Counterparts, employing a few British Expatriates and other Nationals, and by seconding for further study a large number of Sierra Leoneans to prepare for future staff positions, both the School and the College can be staffed adequately to provide for large numbers of students by 1967.

   c. The extremely comprehensive, multi-purpose educational programme suggested in the aforementioned memorandum will prove acceptable to the people of Sierra Leone, and this programme can be rather extensively developed by 1967.

   d. There will forthcoming from the Sierra Leone Government substantial financial support for both capital and operating costs, and this support will be augmented from outside sources.

   e. Present Njala facilities, with some renovation and alteration, can be made adequate for getting both the School and the College underway in September of 1964.

   f. By the end of 1964-65, at least the following new facilities will be ready for occupancy by Njala University College (thus freeing space in the NTTC area for Experimental School use): library, science building, student center, and twelve to fourteen staff housing units.

3. General Principles. The following are suggested as principles which should guide the development of the Experimental School:

   a. The educational purposes to be achieved should be the dominant factor affecting all decisions concerning the development of the educational programme.

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* Since this document was prepared a decision has been made by the College Council to postpone the complete development of the experimental school.

b. Every decision reached and every measure undertaken should contribute to the implementation of long-range plans for the development of the School.

c. The Experimental School should develop in close relationship to Njala University College and as an integral phase of a total educational system which encompasses programmes ranging from nursery school work to degree programmes at University level.

d. Indigenous personnel should be utilized to the maximum extent feasible in staffing the institution.

e. Indigenous materials and labor should be exploited in building and maintaining the physical plant.

4. Projected Enrollments. The need for primary education in the immediate area and the need for additional places for secondary school places in Sierra Leone are such that there should be no difficulty in attracting pupils in the numbers indicated in Table 1, assuming of course that staff and facility requirements are met.

5. Programme Development. The detailed development of the educational programme of the Experimental School must necessarily await the employment of at least the key members of the staff of the School and of the Education Faculty of the College. The formulation of the kinds of experimental and demonstration programmes which will advance primary, secondary, and adult education in Sierra Leone will require the effective participation of all members of staff. The major functions of the School dictate that its programmes undergo continuous evaluation and that change and improvement be the order of the day.

The assumption is that the entire staff for the first year of operation will be imployed and posted by June 1 of 1964, and that they, along with U. S. counterparts, will lay out long-range plans for the development of the School and make specific preparations for getting the School underway in September of that year. The purposes and characteristics of the School as presented in the aforementioned memorandum, along with the development schedule shown in Table 2, may serve as guide to staff as more detailed plans are formulated.

6. Preparation and Employment of Staff. The major purposes and the mission of the Experimental School and of Njala University College strongly suggest that staffing the School is a problem of much greater magnitude than that of merely recruiting and employing staff members in sufficient numbers to meet the instructional demand at a given time. The School, together with the College, should not only promote educational innovation and develop programmes which will spearhead educational advancements in Sierra Leone, but it should become the center for developing educational leaders, many of whom will leave the staff to assume responsible leadership positions in other educational institutions of the State. Thus the School and the College constitute a training ground for educational statesmen. New staff members will be added to the staff each year, while some experienced and well-educated members may move on to important positions in the educational system of the State.

Table 1

Enrollment Projections, Experimental School

1963-67

School Year

Level	1963-64	1964-65	1965-66	1966-67
Total: Jr. Segment[1]	366	450	550	600
Nursery School	-	20	40	40
Kindergarten	-	30	60	60
Primary I-VI	366	400	450	500
Total: Sr. Segment	-	160	320	400
Form I	-	80	80	80
Form II[2]	-	80	80	80
Form III[2]	-	-	80	80
Form IV[2]	-	-	80	80
Form V[2]	-	-	-	80
Grand Total[3]	366	610	870	1,000

1/ It is anticipated that pupils in the Junior Segment will commute from their homes in the area, but that the majority of pupils in the Senior Segment will come from all sections of Sierra Leone and will thus be boarding pupils.

2/ Some attrition is anticipated, particularly in the Senior Segment. Fairly uniform enrollments in Forms I through V will be maintained, however, by admitting advanced transfer pupils in the upper Forms as vacant spaces occur.

3/ The proposal is that enrollment of full-time primary and secondary pupils be held to a maximum of 1,000. The enrollment of part-time students in the Adult Education Programme will be limited only by the demand within commuting distance of the school.

Table 2

Schedule for Developing Educational Programme

1963-67

1963-64

1. With teachers presently employed, continue with present program for 366 pupils in Practice School.
2. By June 1, employ and post the 20 teachers required to staff Exp. Sch. in 1964-65, and assign to task of planning and preparing for 1964-65 programme.
3. Analyze records of applicants for admission to new Experimental School.
4. Plan programme for Nursery School and Kindergarten.
5. Outline programme for Primary and Secondary Segments.
6. Prepare course outlines, tests and examinations, lists of text, references and training aids for Primary Classes and for Form I and II.
7. Complete arrangement of instructional facilities in library, classrooms, and laboratories to be used during 1963-64.
8. Plan system of collecting data on pupil achievements.
9. Prepare instructional materials and aids to supplement those available from commercial sources.

1964-65

1. Conduct programme planned during latter part of previous school year:
   a. One nursery school class.
   b. One kindergarten class.
   c. Three sections each of Class I, II, and III.
   d. Two sections each of Class IV, V, and VI.
2. For pupils in Class V and VI, a degree of specialization will be provided. Each pupil will receive, under a special teacher and in special laboratories, instruction in home science, arts and crafts, and music.
3. Each teacher assigned to Form I and II instruction will teach only in those areas in which he is specifically and adequately prepared. Each pupil will take work with several teachers. The subjects to be required will include: English, history, mathematics, home science, art and music, agriculture, and crafts.
4. At least half of the teachers will continue in employment through June, July, and August and join with the new teachers for 1965-66 in revising programme and planning for 1965-66.

1965-66

1. Conduct revised, improved, and expanded programme for Nursery School through Form II.
2. Inaugurate instruction for Form III and IV.
3. Add biology and second year of home science, agriculture, and vocational-industrial subjects for Form III and IV pupils.
4. Launch work-experience programme Form IV pupils; initiate agricultural, industrial, and constructional enterprises--Form IV pupils.
5. At least half of staff to continue in employment and join with new teachers posted in June in preparing for expanded and improved programme for 1966-67.

1966-67

1. Add advanced work in basic academic areas and in agriculture, trades and industries, and home science for Form IV and V pupils.
2. Initiate programme in business and office occupations.
3. Expand work experience programme and involve all Form IV and V pupils, boys and girls, in it; expand agricultural construction and industrial enterprises.
4. Add special services and instruction to programme of School: speech correction, remedial reading, special classes for handicapped, etc.
5. Continue with at least half of staff during June, July, August in conducting major evaluation of entire programme and planning for further improvements.

The preceding is the rationale behind the staffing plan shown in Table 3. The implementation of this plan requires the following:

a. Aggressive recruitment of the staff required for the first full year of operation (1964-65). Exploitation of the best-qualified Sierra Leoneans who can be pressed into service; the employment of a few competent personnel from Europe and America, but more particularly from West African countries.

b. A national inventory of highly-educated people now in Sierra Leone, and the seconding of some of them for further study with employment at Njala as the objective.

c. The allocation of a substantial number of the presently available Government Overseas Scholarships for the purpose of preparing future staff for Njala; also the exploitation of scholarships granted Sierra Leoneans by other countries.

d. The establishment of teaching interneships at Njala, with a close relationship between the teaching experience in the Experimental School and part-time study in the College.

e. A rotation scheme which involves the assignment of persons to the Experimental School as they complete their study abroad, and in this way replacing experienced members of staff who are seconded for further full-time study.

f. Assignment of certain specialist members of Njala University College staff, particularly during the first stage of development, to part-time teaching in Senior Segment of the Experimental School (and possibly some members of Senior Segment staff to specialized College subjects, or even to special instruction in Junior Segment); the exploitation of the total Njala staff in the initial development of a total programme--Primary through College level.

7. Physical Facilities. The preliminary plans for launching Njala University College in September of 1964 include provisions for housing both the Experimental School and the College in existing structures during the first year of operation. It is urgent therefore that present building be renovated well in advance of the opening of the institution in order that classroom and laboratory equipment may be installed and made ready for service by September 1. In the meantime a long-range plan for the development of the entire physical plant will be formulated. It is anticipated that some new structures will be erected during the 1964-65 school year, but that these will be designed and located in accordance with the development plan.

Table 3

Staffing Schedule, Experimental School

(1963-67)

Assignment	Number Staff Members Required			
	1963-64	1964-65	1965-66	1966-67
Grand Total[1]	27[2] (30)[3]	27 (30)[3]	40 (34)[3]	47 (34)[3]
Total: Senior Segment[1]	10 (17)	10 (17)	19 (21)	27 (21)
Total: Junior Segment[1]	16 (12)	16 (12)	20 (12)	19 (12)
Principal, Experimental School[1]	1 (1)	1 (1)	1 (1)	1 (1)
Senior Segment				
Dir., Secondary Education[1]	1 (1)	1 (1)	1 (1)	1 (1)
Dir., Work Experience Prog.[1]	- (1)	- (1)	1 (1)	1 (1)
Dir., Adult Education[1]	- (1)	- (1)	1 (1)	1 (1)
Dir., Food Services[1]	1 (1)	1 (1)	1 (1)	1 (1)
Agriculture Teacher	1 (1)	1 (1)	2 (2)	3 (2)
Arts and Crafts Teacher	1 (1)	1 (1)	1 (1)	1 (1)
Bio. Science Teacher	- (1)	- (1)	1 (1)	1 (1)
Business and Com. Teacher	- (1)	- (1)	1 (2)	2 (2)
English Teacher	2 (1)	2 (1)	2 (1)	3 (1)
Home Science Teacher	1 (1)	1 (1)	2 (2)	2 (2)
Chemistry Teacher	- (1)	- (1)	- (1)	1 (1)
Math Teacher	1 (1)	1 (1)	1 (1)	2 (1)
Music Teacher	- (1)	- (1)	1 (1)	1 (1)
Phys. Ed. Teacher	1 (1)	1 (1)	1 (1)	1 (1)
Physics Teacher	- (1)	- (1)	- (1)	1 (1)
Social Sci. Teacher	- (1)	- (1)	1 (1)	2 (1)
Trade and Industrial Teacher	1 (1)	1 (1)	2 (2)	3 (2)
Junior Segment				
Dir., Primary Education[1]	1 (1)	1 (1)	1 (1)	1 (1)
Arts and Crafts Specialist	- (1)	- (1)	1 (1)	1 (1)
Music Teacher	- (1)	- (1)	- (1)	1 (1)
Nursery and Kindergarten Teacher	2 (1)	2 (1)	4 (1)	4 (1)
Primary Teachers (General)	11 (4)	11 (4)	11 (4)	9 (4)
Science and Math Specialist	- (1)	- (1)	1 (1)	1 (1)
Reading Specialist	1 (1)	1 (1)	1 (1)	1 (1)
Home Science Teacher	1 (1)	1 (1)	1 (1)	1 (1)
Teacher of Handicapped	- (1)	- (1)	- (1)	1 (1)

1/ At least six of positions in Experimental School will be filled by people who also have appointments in Njala University College:
Principal -- Also Chairman, Education Faculty in College
Director, Secondary Education -- Also member of Education Faculty College
Director, Work Experience Program -- Also holds same position in College
Director, Adult Education -- Also Director of Extension in College
Director, Food Services -- Also holds same position in College
Director, Primary Education -- Also member of Education Faculty in College

2/ The entire staff for 1964-65 school year should be employed and posted no later than June 1, 1964, and assigned the task of formulating plans and preparing for the first year of operation of the Experimental School.

3/ The numbers enclosed in parentheses indicate number of persons for the various types of positions who should be recruited and seconded for further study. Since some will continue their study for more than one year, the total number to be recruited and seconded for further study during the four years will be numbers indicated for this period.

APPENDIX J

CAMPUS PLANNING

Some of the problems confronting the Campus Planner-Architect are listed along with suggestions for their solution.

1. At what rate will the College grow? Estimates have been prepared for the expected rate of expansion in the certificate and degree programs. The incoming applications for admission may lend some support to these estimates or indicate their error. The expected growth of Fourah Bay College is also one index as is the rate of students completing secondary school in Sierra Leone.

2. What rate of capital expenditures will be supported by the Government? While certain funds can be anticipated from sources other than Government, the degree of Government support of the institution will be decisive. It does not appear likely that capital expenditures covered by budget allocations will exceed $150,000 annually. Since the Sierra Leone Production Marketing Board had not by March 1, 1964, given an answer to the request made by the Council, their participation must remain an unknown quantity. Immediate steps must be taken to secure such information from the Board.

Steps must also be taken at once to determine whether A. I. D. will implement a suggestion made that they might be able to provide modest skeleton structures (roof and supports) which can be "filled in" by student labor. Block-making equipment must be obtained without delay.

3. Where to project the future growth of the College campus? Some possibilities are:

a. Extend the expansion of instructional structures around the periphery of the present athletic field, or

b. Use the athletic field for future construction and move the athletic facility into the "bush" east of the field, or

c. Put new structures where the Primary School and the Student Farm are presently situated, (the Primary School buildings would not be difficult to replace), or

d. Make over the present College campus into a primary-secondary school installation (with boarding facilities) for the practice-experimental school needed by the teacher training and research programs. This would necessitate moving the College to a new area. Obviously the Experiment Station facilities could constitute a nucleus for the new development along with the kola tree grove, the vacant area west of the Station's main building and part of the present 28 acres devoted to agricultural plots. These plots can be moved onto new land to be acquired.

4. Future staff housing? A more practical and less expensive type of faculty housing is badly needed. Housing should be located so as not to hamper the College's expansion. Good cross-ventilation, ceiling and exhaust fans, and an attractive view are all worth consideration.

5. Remodeling and replacement of staff housing. Several houses are dilapidated and will need replacement or extensive remodeling. Additional electric wiring, screening, and installation of flush toilets are other items needed in some of the housing.

6. Best use of present facilities. The planner, in cooperation with the principal and staff, must immediately determine the best possible use for each room in the present buildings for the school year, 1964-65. The preliminary allocations may not be the best ones.

An inventory will show about 7 office spaces at the Training College and 15 at the Experiment Station plus space for clerical staff. The principal wishes to remain at the Station and obviously the University of Illinois Chief of Party must also. Academic staff in

teacher training and in sciences may want space at the College, nearer students. Agricultural staff may prefer locations at the Station. The staffing pattern for Njala University College and University of Illinois counterparts will serve as an aid.

7. Plan remodeling of campus buildings:

a. Improved lighting in library, and elsewhere

b. Installation of 2-3 air conditioning units in library

c. Repair ceilings of buildings - or develop a better type

d. Construct new women's toilets and laundry facilities at west dorms

e. Develop quarters forhall wardens at the dorms by consolidating two rooms plus, or by constructing "L" with toilet and bath facility.

f. Install asphalt and vinyl asbestos tile floors for certain rooms, e. g., biology and other laboratories, library, dining hall, and kitchen.

8. Design certain essential campus structures:

a. Chemistry, biological sciences, physics laboratory building

b. Library

c. Shops facility for Agricultural Engineering and Building Trades instruction.

d. Student Facilities Building (student bookstore, cafeteria, recreational facilities, etc.

e. Classroom building

9. Development of research laboratories. A refurbishing of the laboratories at the Station is essential, but program and functions must first be roughly delineated.

10. Locate and sketch development of simple shopping area for staff, students, and villagers for future use. The area between the College-Station road and the workers' compound seems indicated.

11. Locate future power plant, water treatment plant, medical clinic-hospital. Simple plans would be useful.

12. Devise plans for a better means of access to the oil palm plantation across the Taia River, e. g., cable-guided outboard motor boat or small barge.

13. Plan a practical improvement for primary school. Find a location for an expanded facility to provide for:

a. More rooms in order to reduce classes from 45 to 35 (or ewer) students.

b. More playground space

c. At least 2-4 additional houses for instructors

d. A school lunch facility (very simple)

NOTE: If the decision is for the College to expand at the present Training College location, then the primary school, possibly, should be moved entirely.

APPENDIX K

BUDGET FOR EQUIPMENT AND SUPPLIES

1.	Expenditures for which AID/SL has given approval:		
	a. Engineering shop equipment	$21,000.00	
	b. Construction kits (plumbing, masonry, etc.)	3,000.00	
	c. Office equipment	1,775.00	
	d. Library equipment	1,440.00	
	e. Jeep, Model J1645W4 Wagoneer	2,520.00	
	f. Household "Survival Kits" (2)	240.00	
	g. Accounting Office equipment	1,260.00	
	Sub-total		$31,235.00
2.	Expenditures awaiting suggestions and final approval of AID/SL:		
	a. Home Economics laboratory equipment	1,840.00	1,840.00
3.	Expenditures due to be placed on order by August 31, 1964:		
	a. Vehicles (2)		
	1 Rugged carry-all	3,700.00	
	1 Volkswagen estate wagon purchased under special dispensation by U. S. AID. Price delivered in Freetown (duty-free) is $1,750.00. If this cannot be done, recommend rental in Sierra Leone	1,750.00	
	b. Tractors (2)		
	1 Farm tractor, medium size	4,400.00	
	(equipment to be determined)	1,500.00	
	1 Farm tractor, small (farmall 240)	3,300.00	
	(equipment to be determined)	1,000.00	
	c. Accounting Office equipment and supplies		
	1 Accounting-bookkeeping machine, 220 V, 50-cycle, multi-purpose	1,500.00	

	1 Cash Register, 220 V, 50-cycle, National	$ 1,200.00	
	1 Limited size bookkeeping machine (Use National Cash Register Co. equipment as Freetown has service. New decimal system due soon.)	1,800.00	
	Supplies and minor equipment	2,000.00	
d.	Botany-Zoology laboratory equipment and supplies (list prepared)	5,600.00	
e.	Library equipment (built locally)	3,500.00	
f.	Books, journals, periodicals for College and Station libraries (not all ordered by August 31)	10,000.00	
g.	Physical Education equipment	3,000.00	
h.	Student recreation equipment	4,000.00	
i.	Kitchen and dining halls equipment. Refrigerator, stoves, tables, chairs, utensils (used in Home Ec. work as well as feeding)	5,000.00	
j.	Additional office supplies	6,000.00	
	Sub-total		$ 59,250.00

4. Expenditures to be programmed later, probably after August 31, 1964:

a.	Chemistry laboratory equipment and supplies (no chemistry taught the first year)	10,000.00	
b.	Experiment Station equipment	30,000,00	
c.	Contingencies	7,675.00	
	Sub-total		47,675.00
TOTAL (1-4)			$140,000.00