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END OF TOUR REPORT
BY
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USAID/LIBERIA

I. General

This report covers the period July 1960 to February 1962 during which time the writer was assigned as Food and Agriculture Officer to USOM/Liberia.

Upon arrival at USOM/Liberia, it was found that the primary immediate concern of the Mission was to: (1) establish improved working relationships with the Secretary of the Department of Agriculture and Commerce; (2) organize a USOM Agriculture Advisory Staff adequate to do an effective job of advising and assisting the GOL in the improvement and development of the agriculture economy.

A staffing pattern was recommended and approved by the Mission and ICA/W for an agricultural advisory staff considered necessary to provide the technical support to meet the immediate agriculture program needs of Liberia.

Rapid action was taken to recruit the key personnel requested and during the past one and a half years tremendous progress has been made in improvement of the organization and staff of the DAC.

With the strengthened advisory staff, effective working relationships have been established with the personnel of the Department.

II. Objectives

The general objective of the USOM/GOL cooperative program was to raise the efficiency and effectiveness of the Department of Agriculture and Commerce through improved organization, administration, training and personnel management.

The aims were to:

1. Increase agricultural production with emphasis on protein producting crops.

2. Improve the diet of the people with emphasis on providing diversified crops at costs low enough to be available to all the people together with an educational program to teach the need for and preparation of nutritional foods.

3. Expand the number and quantity of exportable crops and to upgrade the quality and standards to compete on the world market.

4. Raise the standard of living and the economic level of the hinterland farmer.

5. Raise the general level of the Liberian economy.

III. Activities

1. DAC Organization - Early in 1960, the Department of Agriculture and Commerce was reorganized along functional lines in accordance with a plan and recommendations of the Mission from the Food and Agriculture Organization of the United Nations. This was a sound plan and provided for the establishment of basic agricultural services. Although progress was initially slow, within the past year a general reorganization of personnel and activities within the Department has taken place. The Secretary of Agriculture and Commerce, appointed in January 1960, has transformed the Department from a one-man regime into an effective and efficient administrative organization. While the new organizational plan is comprehensive and includes the total requirements of a complete Department of Agriculture, staffing is necessarily slow and full implementation with trained personnel will require several years. Current emphasis is on developing effective national services including a National Agricultural Program Planning Office, Agricultural Experimentation, Agricultural Extension, Forestry, Fresh Water Fisheries, Agriculture Economics, Marketing and Credit. The program is designed to strike a balance between research, extension education, credit and marketing.

Establishment of a National Agricultural Planning Office - The National Agriculture Planning Office was established in the Department of Agriculture and Commerce in December 1961. A Liberian, Mr. Edwin Morgan with a Master of Science Degree from the Tuskegee University, was appointed as head of the office. The Planning Office has the responsibility of making surveys and advising the Secretary of Agriculture and Commerce on the feasibility and economic soundness of agriculture development programs. It is intended also that this office coordinate the Department's activities with the National Economic Development Programs.

3. Human Resources - Development of human resources is considered one of the most important aspects of the Liberian Agricultural Development Program, for both the training of personnel for Government positions and training of future farmers.

Particular emphasis has been placed in developing a strong professional and subprofessional group of Liberian personnel for the Department founded in the technical, social and economic disciplines required for their responsibilities in government and in agricultural and related industrial work. The development of a national government organization in agriculture to provide assistance to farmers has made considerable progress within the short time (one year) that it has been in operation. However, the organization must continue to grow until it will be large enough to reach all farmers. At present, the number of trained personnel available limit the operations of the Department. Training has been organized on a broad base starting from the elementary school level allowing for the normal wastage and dropout, in order to guarantee sufficient numbers completing the training to satisfy the professional requirements of the Government. The importance that has been given this program by the GOL is indicated by the tabulation in attachments A and B which show that during CY 1961 there were a total of 604 Liberians studying or in training in formal courses in agriculture

and [illegible] subjects. These include elementary, secondary, college level and non-degree professional training. Thirty percent of these are on scholarships. The USOM/L made a significant contribution to the agriculture participant training program in FY 1961. Of the total 102 USOM/L financed participants in FY 1961, 64 were from agriculture. Additional in-service training is described under the activities of the Extension Service.

4. Agricultural Experimentation

(a) General - The National Agricultural Research Service was initiated in 1953 with the establishment of the Central Agricultural Experiment Station at Suakoko. The purpose of this activity is to acquire new techniques and plant varieties and animal breeds through studies and experimentation and to test their adaptability to the prevailing conditions existing in Liberia. This service is basic to the entire GOL agricultural program. Continuing investigation of the conditions responsible for the promotion of satisfactory plant and animal growth is necessary so that reliable recommendations can be offered to farmers through the National Agricultural Extension Service.

(b) Achievements - The Department of Agriculture and Commerce has been effectively assisted in the operation and development of the 500 acre Central Agriculture Experiment Station at Suakoko. The organization of the Station includes the following Divisions of Agricultural Science: Agriculture Engineering, Agronomy, Animal Husbandry, Entomology, Freshwater Fisheries, Horticulture, and Soils. Appropriate experimentation, demonstration and training activities have been conducted in each of these divisions as dictated by the needs of the country. The vital importance of the Station to the DAC in fulfilling its obligations to the agricultural industry has been recognized sufficiently to cause the Department to adopt a 10-Year Plan of Development for the

Station [illegible] involving an investment of some $760,000. Since March 1960, the administration of the Station has been the responsibility of a Liberian Director with the advice and assistance of USOM Advisor. While there are not yet trained Liberian personnel available to fill all of the Project Leader positions, DAC personnel have accepted major responsibilities in FY 1961 in their respective fields for the conduct of the experimental work.

5. Extension Service - This activity is to increase agricultural production, exports and farmer income by teaching farmers improved methods, techniques and practices and by introducing improved seeds, plant varieties and breeding stock.

Achievements

(1) National Staff - The National Extension Service was established January 1961. Tremendous progress has been realized during its existence. A Director, two Deputy Directors and eight project leaders presently staff the National Office. Their training is as follows:

2 - M.S. degree; 5 - B.S. degree

4 - Average of 2 years beyond high school

In addition, seven Extension Agents and 84 assistants are on the field staff. All seven agents have a B.S. degree in agriculture.

(2) Rural Youth Activities (4-H Clubs) - Some youth club work has been done in the past, but at the time of the arrival of the Rural Youth Advisor in December 1960 there were no active clubs or 4-H activities. Emphasis during the past year has been given to the development of National 4-H club activities. Fourty-three clubs have been organized with a total enrollment of 1337 members. A National youth club leader with a B.S. degree in agriculture and nine assistants (graduates from BWI, a high school level vocational agriculture school) are employed in the national youth program of the DAC.

(3) Home Economics - The Home Economics activity was initiated in July 1961 with the employment of a Liberian Home Economist, a University graduate, by the DAC. Five Home Economics assistants are in the process of being trained in preparation for assignments in the District Extension Agent Offices. The DAC has placed high priority on this activity. Advice and guidance is provided by a USAID/L Home Economics Advisor who arrived at post in August 1961.

(4) Workshop In-Service Training - Great emphasis has been given to upgrading the extension workers of the DAC since the inception of the National Extension Service January 1961. Following is a tabulation showing the man days in-service training accomplished during 1960, 1961 and up to February 17, 1962:

Personnel Traired	Man Days of Training		
	1960	1961	1962
National Supervisory Staff, Specialists and District Agents (Professional personnel)	90	202	90
Extension Aides (Subprofessional)	589	2236	570
Vocational Agriculture Teachers	108	70	30
Home Economics Aides			126
Total	787	2506	766

(5) Miscellaneous

(a) Planned family farm unit demonstrations have been initiated with 60 farm families. A satisfactory degree of success has been attained.

(b) More emphasis is being given to production of diversified food crops such as fruits, vegetables, rice, peanuts and poultry.

(c) 2,500 certified baby chicks have been distributed in small lots to farmers along with basic breeding stock of swine, rabbits and milk goats.

(d) Nine agricultural councils and other community type farmer organizations have been organized.

6. National Forest Service - A Bureau of Forestry was established by an Act of the Liberian Legislature in 1953. The objective of the Bureau was to establish a Forest Service to manage the forest resources of the nation to insure their rational utilization, management and protection. Liberia's forests represent her most valuable renewable resource, and the potential for a vastly increased income from local consumption and exports is very good.

Achievements

The forestry program has been one of the most successful Food and Agriculture Division activities. The progress of this program can be considered an example which could be followed in the development of other technical assistance programs. The step by step development began with the initial reconnaissance survey by a U.S. forester in 1947 and 1948. As a result of this survey, a technical adviser was assigned to Liberia to assist the Government in 1951, with a team being assigned in 1953. Between 1951 and the present time, the following were organized and established: (1) a Bureau of Forestry; (2) a College of Forestry in the National University; (3) a National Staff of professional and subprofessional foresters; (4) creation of a National Forest reserve system with 50% of the existing forests in Liberia (which represents 17% of the total land area of Liberia) placed under the protection and management of the Department of Agriculture and Commerce's Bureau of Forestry; (5) initial establishment of a field administrative organization to implement forest reserve management.

Three classes, totaling 24 Liberians, have graduated with Bachelor's degrees from the College of Forestry of the Liberian University. These are all employed either in the Government's Bureau of Forestry or in private industry.

Liberian timber industry has been greatly stimulated by the activities of the Bureau of Forestry with the advice and guidance of the USOM Forestry Advisors. The current trend is toward a systematic approach of encouraging private companies to develop the timber resources. Currently, there is a great increase in the number of companies approaching the Government for timber concessions. Although production is still small, there is an annual increase. In 1960 lumber production was 10,865,000 board feet as compared to 2,350,000 board feet in 1956. The trend is toward a rapid increase in the rate of production in future years. It is estimated that by 1972 timber production will reach 185,000,000 board feet valued at $15,000,000 annually.

7. Freshwater Fisheries

The freshwater fisheries activity has been conducted on two fronts - research and extension. The purpose of the program is to help alleviate the dietary protein x shortage and to boost the income of the farmers by promoting the establishment of fish ponds by private farmers, communities, and schools and other local institutions. The advantages of this program in Liberia is that it provides a source of fresh fish to the hinterland resident where lack of transportation, storage and handling facilities preclude obtaining supplies from coastal sources.

Achievements

The freshwater fisheries program was initiated at the Central Experiment Station in 1953. Research facilities, buildings, and equipment have been developed, and an organization established and staff trained.

(a) The training phase of the program has received special emphasis. One trainee is now in the U.S. studying for a Master's Degree in Zoology and Freshwater Fish. Another with a B.S. in x Zoology is assigned to the project, and two are studying for a B.S. degree at Cuttington College in Liberia.

Research is continuing. Several fish species are still undergoing testing for rate of growth, feeding habits, and pond spawning with a view of selecting the most desirable for stocking ponds throughout the country. Other experimental activities are concerned with the prevention of schistosomiasis through destruction of the host snail.

(c) A relationship of cooperation has been established with the Extension Service. Thirty-seven farm ponds have been developed on individual farms. During 1960 53,000 pounds of fish were produced, valued at $17,000.00. One USOM Fisheries Advisor provides the technical advice for this project.

8. Agriculture Credit

The credit activity was initiated upon the arrival of the USOM Credit Advisor in July 1961. The program was approved as a result of a survey made by Mr. Chester Tyson, ICA Credit Consultant, June-July 1960. It was concluded that Liberia has great need for a government-financed agricultural credit program. This financing is considered an investment rather than an expense as it will make possible an expanded and intensified agriculture.

Achievements

1. Recommendations have been drafted for legislation to create the Agricultural Credit Corporation. These recommendations have been endorsed by the Counsel of the Liberian Senate and copies reproduced and forwarded to the President and the Legislature by the DAC.

2. In anticipation of the creation of the Agricultural Credit Corporation, suggested by-laws and rules and regulations governing its operations have been prepared for the consideration of the Board of Directors of the Corporation as soon as it is constituted.

...rder to make credit available to farmers in the outlying areas credit agencies will be needed. Farmers' Credit Cooperatives are recommended to perform this function, and recommendations for amending the Cooperative Societies Act of 1936 have been drafted to make it more adaptable to present day needs, not only for credit but for farmers' cooperatives generally. Suggested by-laws have also been submitted for such cooperatives.

4. A Liberian who recently returned from the U.S. with a M.S. degree in Animal Husbandry has been appointed counterpart to the Agricultural Credit Advisor and is being oriented in and familiarized with the fundamentals of an agricultural credit program.

9. Marketing Service

In the DAC organization, marketing is a function of the Extension Service. Marketing of agricultural products is becoming one of the major concerns of the Liberian producer. The activity comprises all the operations involved in the movement of food and raw materials from the farm to the final consumer. Advice has been provided by a USOM Marketing Advisor since his arrival in April 1961.

Achievements

1. Two community markets have been built up-country under the supervision of the Extension Service. One at Gbarnga and one at Ginitown. The Gbarnga market includes an agricultural extension office.

2. Two marketing specialists have been appointed by the DAC.

3. One marketing specialist recently returned from USOM/L financed xx participant training in the United States.

4. To meet the urgent needs for the processing of cash crops, methods and equipment for processing have been demonstrated at strategic areas within Liberia.

... agricultural processing clubs have been organized. By means of demonstration of processing machines, two palm kernel processing clubs have been formed. These clubs are usually organized in villages having an abundance of export crops such as coffee and palm kernels.

III. Favorable Factors

1. Reorganization of the DAC

During the past one and a half years, significant steps have been taken to improve the effectiveness of the Department of Agriculture and Commerce. The reorganization of the DAC has resulted in establishing an effective functional organization. Recommendations have recently been made to the President proposing an establishment of a separate Department of Agriculture. Studies are being made to improve administrative practices which would speed up payrolling, purchases, and logistic support of the field operations. These actions would greatly improve the operational structure and effectiveness of the Department of Agriculture.

2. Professional Staff

Newly created positions have been filled with with Liberians who have returned from the United States with university degrees in agriculture. It is the policy of the DAC to employ as many agriculture college graduates as funds permit in order to upgrade the professional level of the staff. In addition to upgrading the staff, special efforts are made to assign qualified agriculture leaders to the rural areas of the country. Returning graduates have been assigned back to the regions of their origin. This has resulted in an improvement of the relationships between the DAC field staff and the rural farmers.

Program Planning

The Government of Liberia is in the process of developing an overall integrated economic program. The Department of Agriculture and Commerce prepared a "10-Year Development and Investment Plan" which presented an estimate of budget and credit requirements for the period 1961-1971. The Food and Agriculture Division, being requested by the Department to cooperate in the preparation of this plan, welcomed the opportunity to assist in presenting agricultural activities in their proper perspective with other government functions and objectives and to lend interpretation to the future developmental needs of these activities.

Within the past three months a National Planning Office has been established. This office is intended to be the clearing house for all proposals for additional agriculture projects and is an important factor in obtaining coordination of the agriculture programs with the overall economic development of the nation.

4. Increased Attention to Agriculture Needs by Government

During the past few months, there has been increased attention to the agriculture needs of the country. During his annual speech in January 1962, the President made special mention of the importance of agriculture to the economic development of the country. Indications are favorable that the DAC may receive additional budgetary support for CY 1962 from the National Budget.

5. Cooperation with U.S. Advisors

Counterparts have been provided for the Agriculture Advisors. During the past one and a half years the Department has employed almost every Liberian who has returned from abroad with a professional agriculture education to serve as counterparts to the U.S. Advisors. Advice has been readily received and recommended programs have been implemented insofar as funds and facilities would permit.

IV, Unfavorable Factors

1. Inadequate Budgetary Support by the GOL

The ratio of Liberia's contribution to agriculture is disproportionately low in comparison with other governmental activities. The 1961 budget for agriculture amounted to only 1.6% of the National Budget. Investments are required in research, extension education, market development and processing, personnel training, etc. Adequate budgetary support is required by government agencies to provide the necessary services and incentives needed to stimulate agriculture development. On the basis of minimum required services, it is estimated that the minimum agriculture budget required for the immediate years ahead should be at least 5% of the National Budget.

2. Lack of Incentives to Produce

The low prices received by the farmer for his produce, shortage of farm labor, uncertainity of the market, difficult and costly transportation, low yields and other factors, leave little incentive for increased effort to produce more than the amount required for subsistence.

A well planned educational program through a greatly expanded agricultural Extension Service together with measures designed to encourage labor to stay on the farm and farmers to produce more are required to reverse the food deficit trend.

3. Unavailability of Local Fertilizers

Liberia does not have a local source of fertilizers. Consequently, this material must be imported at costs beyond the practical reach of the average farmer. This inhibits crop improvement through use of fertilizer as is possible in most other countries.

4. Land-Tenure Practices

Present land tenure practices does not encourage private ownership of x property

by the ... farmers in the hinterland. Shifting agriculture is the standard practice. A very basic and urgent need is the improvement of the land tenure system in Liberia. Farm operators must have title or a lease to a fixed piece of property before they will invest in good land-use practices.

5. Animal Feed Shortages

Animal feed supplies are inadequate and erratic resulting in feed shortages and constant decreases in production. To date poultry has developed more than any other animal industry and thus is more adversely affected. Cereal grains and other ingredients are not produced in quantity, locally, so feed must be imported. Facilities for quantity storage of imported feed grains and a feed mixing plant at the Free Port of Monrovia would be of great advantage to the livestock and poultry industry.

V. Recommendations for the Future

1. Surveys - Long overdue and critically needed is a comprehensive survey of the potentialities of the agriculture resources of Liberia. It is suggested that consideration be given to organizing a balanced team of agriculture specialists from AID or arranging for such a survey by some International Agency such as the World Bank, Ford Foundation, etc. Surveys and feasibility studies should be planned for the immediate furture for the following:

(a) Soil Survey and Land Classification - There is serious need for a soils survey and land classification study as a basis for sound planning for agriculture development on a national basis. Such a survey would include classification, mapping and a study of the factors to determine the uses for which the soils of Liberia are best suited. Such a survey is essential for land use planning and would be useful as a guide for research programs on crops, soils and fertilizers.

) Feasibility Study of Cacao and Coffee Production in Liberia - In addition to a comprehensive soils survey and land classification, a feasibility study of other tree crops such as cacao and coffee should be made. These studies should be made in order to determine definitely whether or not further work should be done to promote the development of either or both of these crops. Such a survey would include determination of the location and extent of the potential areas where either or both cacao and coffee could be produced economically. It would also include a study of the economic factors involving not only local development but the problems of international trade and markets. Other important crops could also be included. Studies would include insect and disease problems, processing and quality control as well as the agronomic factors involved in successful commercial production.

(c) Survey of Potentialities of Developing a Livestock Industry - The potentialities of developing a cattle industry in Liberia using the tetse fly resistant breeds, the N'Dame and W. African Shorthorn as foundation stock is needed. Beef consumption in Liberia is increasing using cattle brought in from across the Guinea border. A study should be made to determine the economic feasibility as well as the specific operational problems such as feed sources, diseases, etc. connected with developing such an industry. It is recommended, therefore, that a livestock study be conducted to guide the USAID/L future efforts in making recommendations to the Liberian Government.

2. Land Tenure - Embark immediately upon a comprehensive program to establish a sound land tenure system for Liberia. This would require establishing National policy and legislation aimed at control, parcellization and settlement of the Public Domain and guaranteeing property rights of tribal families within their traditional tribal areas.

D. Central Agricultural Experiment Station, Suakoko

The CAES has been developed from scratch since the program was initiated in 1953 and has been a USOM project supported by a substantial USOM staff and funds through its entire history. The difficult spade work has been done and the station has passed through the pioneer stage. Substantial progress has been made in developing facilities, physical plant and organization. Emphasis has been on developing an integrated Research and Extension Service. The development has lagged due to the lack of qualified Liberian personnel and to problems of control and logistic support. However, Liberians are now returning from abroad with agricultural training which will make this development possible.

GOL has xxx recognized the weaknesses of the present organization and have requested USOM to change their approach and consider providing operational personnel in order to speed the development of the experiment station, including a professionally qualified and dedicated research staff, facilities and program.

It is obvious that a new approach is now required. It is recommended that consideration be given by AID/L to a contract approach on a long term basis specifically designed to develop a professional dedicated research staff and functional institution. A positive approach is required in view of the long time involvement of the Mission in this program and the need to see it through to a successful conclusion.

Attachments