

A PROPOSED GUIDE

FOR

EXTENSION DEVELOPMENT

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".....the work shall consist of the giving of instruction" --
and his classroom is anywhere men wish to learn.

FORWARD

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The statement on the economic basis for an Extension Service is based on a "Summary of the 10 Year Development Plan" prepared by John Walsh, Program Analyst, USAID/Sudan.

The statement on Program Development is based on material prepared jointly by Dr. John Fenley, Extension Advisor to the Western Region of Nigeria and his counterpart, S. K. Taiwo Williams, Training Officer of the Western Nigeria Extension Service.

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HISTORICAL BACKGROUND

The development of organized agriculture in any country is contingent on the planned contributions of research, resident teaching at the University level, and extension. If the agricultural sector of any economy is to progress according to a predetermined program, all three of these components must not only be present, but must be kept in balance. They are interdependent and no one of them can function effectively alone without the cooperative presence of the other two.

A fact often overlooked is that 100 years ago, which is a relatively short time in the annals of history, the United States had a population of less than 32 million. About 7 million farmworkers produced the food for themselves and the others, a ratio of roughly 1 to 5. A century later the population of the United States is approximately 192 million and each farmworker produces the food for himself and 26 others. This did not happen by accident.

The agricultural revolution in the U.S. can be traced to the year 1862 when President Abraham Lincoln signed into law three bills passed by the United States Congress.

1. On May 15, 1862 President Lincoln signed the bill that established the United States Department of Agriculture with its Federal Agricultural Experiment Station presently located at Beltsville, Maryland. The Department was started with a Commissioner, 9 employees and a budget of \$80,000. A hundred years later in 1962 the Secretary of Agriculture is a Cabinet member responsible for 87,262 employees, over 75,000 of whom are stationed in all parts of the U.S. and the world, and a budget of 7.3 billion dollars.

2. The Homestead Act was signed by the President on May 20, 1862 and opened half a continent to the plow. It provided that citizens could file claims on tracts of federally owned land ranging in size from 160 to 640 acres each. If the homesteader performed the required improvements within a three year period, he was granted permanent title to the land and henceforth was allowed to farm and develop his land as he so desired.

3. The Land Grant College Act (also known as the Morrill Act) was signed by President Lincoln on July 2, 1862. It provided that portions of federally owned land be sold, and the proceeds used for the "perpetual endowment" in each

state of at least one college whose main aim would be "without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

Senator Morrill's bill as enacted by the Congress became the foundation of the United States Land Grant College system, whose 68 members have set a pattern in democratic education.

The next significant action taken by the United States Congress for the advancement of agriculture was the passage of the Hatch Act in 1887. This Act further established cooperative relationships through grants in aid by the federal government to the various state agricultural colleges (land grant colleges) in carrying on research in scientific agriculture. Most agricultural research has since been done by the nationwide network of state experiment stations contributing to the progress of U.S. agriculture.

During the latter half of the 19th century private industry was developing machines to help the farmer. The sticky, root matted soil of the prairie needed the steel plow to prepare a fertile seedbed properly. The mechanical reaper, grain drill, tractor, steel plow, cornplanter and threshing machine were the first of a long succession of machines that have revolutionized American agriculture. Concurrently, the 30,000 miles of railroads started to grow into a giant that carried commodities to farms and farm products to consumers in every part of the country.

As America moved from the 19th into the 20th century, it became increasingly apparent that the outstanding difference between the agriculture of the Old World and the New World was and continues to be emphasis on yield per acre of land in Europe and Asia, and production per man in the United States. Where land is scarce it is the limiting factor in total production. Where labor is scarce and/or well paid, it becomes the dominating consideration.

Agricultural Extension work grew out of an historical situation. It is largely the working together of two great forces, (1) American agriculture, characterized by cheap land, scarce labor, new products, and the use of credit, and (2) American education, characterized by its availability for any man or woman in any field of endeavor. Of equal importance

is the American educational concept that the mere possession of knowledge alone is of limited value. The measure of an educated person is his ability to put his knowledge to practical application for the benefit of his neighbors (society). This differs from the European concept that an individual's educational level is measured by the knowledge he possesses.

The originator and first leader of Extension was Dr. Seaman A. Knapp, who as early as 1886 went from Iowa to Louisiana where he had charge of the agricultural development of a large tract of land in Western Louisiana. From this experience came the two basic concepts upon which Extension work was built:

(1) Farmers generally will not change a given practice from observing what can be done on farms operated at public expense (agricultural colleges and/or experiment stations). There must therefore be demonstrations carried on by the farmers themselves on their own farms and under ordinary farm conditions.

(2) The establishment of the county agent system, under which farming people make use of trained official helpers permanently located near them from whom they may receive the useful knowledge possessed by these agents and also instruction from the institutions which the agents represent--the various land grant colleges.

The Smith-Level Act of 1914

This is the basic legislation upon which the whole U.S. system of cooperative extension was built. It was passed by Congress in answer to farmer demand for a year around advisory service with adequate financing.

Principle provisions of the Act are:

(1) Cooperative Character of the Work

(a) It must be carried on in connection with the land grant college, in cooperation with the United States Department of Agriculture.

(b) It enables the use of plans which are mutually agreed upon by the U.S. Secretary of Agriculture and the land grant college.

(2) Wide Scope of Work

(a) It provides that work is to be with persons not attending or resident in land grant colleges. There is no limitation as to age, sex, race or business.

(b) The subject matter scope is practically unlimited, "the giving of instruction ... in agriculture, home economics and subjects relating thereto."

(3) Educational Character of the Work

(a) Cooperative Extension work is a function of a land grant college. The Morrill Act provides what these colleges are to teach.

(b) The Act specifies that the "work shall consist of the giving of instruction."

(4) Emphasis on the Demonstration

(a) The work "shall consist of the giving ... practical demonstrations."

(b) It shall impart "information ... through demonstrations."

(5) Finances and Distribution is Based on Rural and Farm Population

Congress is authorized to appropriate such sums as it determines to be necessary. These sums are to be offset by each of the states. Certain sums are available to the states without offset. In general the balance of the appropriated sums have to be duplicated by a like amount raised within the state. The Federal Extension Service shall receive such amounts as Congress shall determine for administration, technical, and other services and for coordinating the extension work of the Department and the several states.

FUNCTION OF AGRICULTURAL EXTENSION IN RURAL DEVELOPMENT

Those people who live on the land to plant, to cultivate and to reap the fruits of the soil are a most important segment of the economy in every country. It is the farmers, the cultivators, of a country who supply the food, the fiber and other raw materials needed for the city dwellers. The rural segment of the society forms a reservoir of potential and professional workers for the urban centers. When farm people prosper, they form the greatest market for goods manufactured in the cities. When agriculture prospers, the entire country prospers.

The urgent need for agricultural improvement and rural development in many countries of the world is the application of scientific knowledge and technology to farming methods. With present day knowledge and development of agricultural science there is little excuse for backwardness in agricultural production and improved rural living. The advances in agricultural technology have kept pace with science in other fields, but the application of this knowledge to the practices and techniques used by farmers has not always kept up with this progress. The gap between available knowledge and the actual practices of farmers is sometimes widespread. To close this gap between known agricultural science and actual practices of producers on the land is the challenge of Governments and Ministries today.

Many techniques have been developed in recent decades in the art of education which are designed to take scientific agriculture to farmers at times, places and under conditions which enable him to relate it to his farming practices. This educational technique of taking this knowledge to farm people and helping them to help themselves has been called Agricultural Extension. This form of service has been referred to as the educational arm of the Ministry of Agriculture. It is a service which interprets the technical information to farm families through demonstrations, meetings, visual aids, illustrated leaflets, posters, exhibits, press, radio, T.V., and other educational devices. It emphasizes the principle of "learning by doing" based upon the philosophy that "What a man sees he may doubt, what a man hears he may also doubt, but what a man does he cannot doubt."

Extension works with people through the organized groupings already in existence at the village, or community, level by the recognition and use of the natural leadership of these groups. The Agricultural Extension Service not only

works through organized rural groups, but makes its major impact on rural life by working with the farm family as a unit. It recognizes the importance of the unified family approach by working with (1) the farmer on his agricultural problems, (2) the farmer's wife with her problems of "food, shelter and clothing" as related to the farm family, and (3) the farmer's children by directing them in programs and demonstrations which teach them new practices, and through them to demonstrate the practices to parents and neighbors.

The development of an adequate Agricultural Extension Service, capable of reaching every farm family with some improved methods and practices which will enable them to increase production, increase income and improve living conditions, involves the proper selection, training and assignment of personnel, the organization and development of programs based on the needs of the people and the use of local talent and resources along three major interests of farm families and rural communities, namely Agriculture, the Farm Home and Rural Youth.

Agriculture

Every farm family needs up-to-date information on the improved methods of farming, such as crop production, animal production, water utilization, land use and conservation, farm equipment and machinery, marketing, credit and supplies needed to inaugurate recommended practices. To reach every farm family with practical assistance in these areas requires an adequate force of trained agriculturists in not only these subjects, but also in the art of involving people and promoting change. In fact the whole purpose of Extension is to involve people in programs which will bring about change in attitude, change in methods and will lead them from present status into better living standards.

| <u>Now</u> | <u>Interest</u> | <u>Desire</u> | <u>Action</u> | <u>Satisfaction</u> | <u>Goal</u> |
|-------------------------------|---|------------------------|-------------------------|--------------------------------------|---------------|
| Present Status of Farm Family | Through Information Demonstrtn. Education | New Methods New Skills | Adoption of New Methods | Increased Product & Increased Income | Better Living |

These workers, whether called Agricultural Agents, Advisors, or Agricultural Officers, are essential to a program of farm and rural development. They must have the backstopping and support of technical specialists to keep them armed with the latest facts, methods, and necessary material. The strength of any agricultural economy depends upon these "workers" who keep in direct contact with the farmers.

The Farm Home (Home Economics Extension)

The whole aim and objective of the farmer and his family in producing better crops and livestock and of utilizing and conserving his resources, is to improve their living standard, to improve themselves, educate their children and to enjoy some of the blessings of society. This is the driving urge and incentive of every farmer and his family. If he does not have this urge, it is the function of the Extension Service to work with him to develop his interest, spur his desires and promote his aspirations.

When farmers increase their income, their knowledge and appreciation of proper values in life must also increase. They must be informed on the importance of proper nutrition and balanced diets for the family, methods of proper preparation and preservation of foods, family health and sanitation precautions, economic construction, maintenance and repair of clothing, modern methods of home improvement to make his home more comfortable, more convenient and more attractive.

To work with the farm women and girls along these lines is as important to the welfare of the farmer and rural life as the increase in production and income. This is definitely a function of a trained and practical home economist. Such workers should be able to contact farm women and girls in village groups and classes for practical demonstrations, instruction and training. These workers at the village level will require national supervision and technical backstopping in the areas of (1) Food and Nutrition, (2) Clothing, (3) Home Improvement, and (4) Health and Rural Sanitation.

Rural Youth

A very important part of the work of the Agriculturist and the Home Extension worker is to incorporate the interest of the farm youth into the program of better production and better living. A very effective and proven procedure in 68 countries of the world has been to include farm boys and girls, between the ages of 10 to 20 years, in the program of the Extension Service. The interest of these boys and girls in the farm program is sharpened by assisting them to select certain specific jobs in the home, or on the farm for which they will assume the responsibility for doing. These activities are called projects. A project may be poultry, to feed and manage according to instructions, a vegetable garden, entomology, a plot of cereal or fruit. It may be a clothing project, learning to cut patterns, sew, make and

repair clothing, or it may be to make certain improvements in one room of the home. The idea is that the boy or girl in following the instructions of the Extension Service, learns certain improved methods and skills by actually doing them. They demonstrate these improved methods to parents and neighbors. They compete with each other to do a better job. They exhibit their products and learn to judge good workmanship. They develop responsibility, dependability and learn the value and dignity of labor with their own hands.

These youths form clubs in the villages and learn to preside over meetings, take part on programs, elect their own officers. They hold special activities such as recreation, exhibits, tours, camps, contests and learn to cooperate and work together. They learn, develop and become good citizens.

This type of work with youth requires the direction and leadership of a trained worker --a rural youth specialist to train agricultural officers in this type of work and direct the program from the national level.

It is through these three principal phases of work, agriculture, home extension, and youth, combined, that the Agricultural Extension Service has been able to make the impact that it has in every country where it has been organized. It is from the HOME and the FAMILY that arises the urge for greater achievement and noble aspirations which serve as the base for the greatness of any country.

This is the philosophy which has made the Agricultural Extension Service a most serviceable movement in America and one of the most effective programs in rural development in other countries.

ECONOMIC BASIS FOR AN EXTENSION SERVICE IN THE SUDAN
(Extension Education in the Ten Year Development Plan)

The average income per capita for the entire Sudanese economy prior to the Ten Year Plan period was LS 30 (1 LS = \$2.89). The long range objective of GOS is to double this amount within the next 25 years. Since population will then be close to 25 million, which is double the pre-plan figure, it will be necessary to quadruple production during the next 25 years.

The shorter objective of the present ten year plan is to raise the over-all per capita average income by 25% to LS 37.5. With population growing at an estimated 2.8% per year, gross domestic production will have to increase by 65% during the period. A 5.2% increase per year in GDP is therefore the broad objective for the total economy.

Composition of Gross Domestic Product

| | <u>LS Mlns</u> | | <u>% of Total</u> | |
|--|----------------|------------|-------------------|-----------|
| | 60/1 | 70/1 | 60/1 | 70/1 |
| 1) Agriculture, Forestry, Livestock and Fisheries | 203 | 300 | 57 | 51 |
| 2) Industry, Mining, Public Utilities | 32 | 93 | 9 | 16 |
| 3) Transport, Commerce | 52 | 82 | 15 | 14 |
| 4) Administration | <u>70</u> | <u>110</u> | <u>19</u> | <u>19</u> |
| Total | 357 | 584 | 100 | 100 |

The major shift in the composition of production will be the increase in the share of the national product of industrial production. This sector is expected to increase almost threefold, but it should be noted that at the end of the present Plan period (1970) agriculture remains 51% of GDP compared with 16% for industry. The products to be manufactured by this tripled industrial production are predominantly consumer goods. There are no plans for the manufacture of capital equipment. Almost all the manufacturing output with the possible exception of edible oils will be for domestic consumption. The composition of exports will therefore remain predominantly agricultural products.

It is generally accepted that at least 90% of the 12.65 million inhabitants of the Sudan derive their livelihood

from agriculture or the estimated 22 million head of livestock. In other words, at the beginning of the Plan period it required 90% of the population to produce 57% of the GDP, and 87% of the country's exports.

As noted above, the Ten Year Plan requires a 5.2% increase per annum in GDP. Since agriculture constitutes over 50% of GDP for the duration of the Plan, it is mandatory that the agricultural sector maintain the annual 5.2% increase as an absolute minimum. Concurrently other sectors of the economy must maintain the same annual increase or better to keep the total economy in balance and on schedule.

A rough estimate of the additional manpower needs required including replacements during the Plan period are as follows:

| | <u>(000 persons)</u> |
|--|----------------------|
| 1) Managerial, Professional, Sub-professional | 9.3 |
| 2) Skilled craftsmen | 49.3 |
| 3) Semi-skilled, unskilled | 570.9 |
| 4) Administrative, clerical, all levels | 100.0 |
| Total | <u>729.5</u> |

In an agricultural economy the only source of the above manpower requirements is the agricultural sector. This has been traditional in developing economies around the world. The 729,500 workers needed constitute 6.4% of the present estimated total agricultural labor force. The problem for agriculture therefore resolves itself into how to develop productive capacity capable of a sustained growth rate of 5 1/2% per annum that can raise agricultural GDP from LS 203 million to LS 300 million per year, and do it in 10 years with a gradually diminishing labor force. The answer is obviously to increase efficiency of production. Improved efficiency of agricultural production will not only increase available food supplies for domestic consumption, but will also release labor for other productive enterprises that are basic to the total economic development. Labor released from agriculture, if gainfully employed, expands the domestic market for agricultural products and non-agricultural commodities.

There is ample documentation available to prove that regimentation cannot stabilize nor assure sustained productive capacity of the agricultural sector of the economy. To cite one recent example--the significant fact is not that Russia

found it necessary to purchase one million tons of wheat abroad (Dec., 1963), but that the controlled productive capacity of all the bloc nations put together could not make up a deficit of one million tons of wheat, whereas one free enterprise nation supplied the wheat from its normal carry-over without demurrage on either domestic or worldwide PL 480 commitments.

The only method of proven reliability to increase efficiency of agricultural production is to provide an incentive market and concurrently an advisory service to help producers take full advantage of market opportunities. The Extension Service is designed for this purpose and as such is capital generating because it works directly with the production unit (the farm family) that converts land, water, seed, power, and labor into GDP. Because Extension does work with the farm family as a unit, there is no need for capital consuming social development schemes. As the productive efficiency of the farm family increases, their social amenities accrue proportionately. There are rarely any "slums" in an efficiently producing farm area operating in a free economy.

The present Ten Year Development Plan projects an increase in the annual agricultural GDP from LS 203 million in 1960 to LS 300 million in 1970, or a total increase in gross product of LS 533.5 million to be realized over the 10 year period. How much of this annual LS 97 million increase can the Government of Sudan afford to pay for a reasonable assurance of attaining the LS 300 million goal? One and one half per cent of the desired increase only is certainly a reasonable price, spread over the 10 year period. This would provide an annual budget of LS 145,500. An effective Extension Service can be developed, trained, housed and posted in all 9 provinces for less than this amount, including amortization of the capital investment. Such a Service would have a headquarters technical staff of 21 and a technical field force of 208, for a total of 229. The suggested organization has a field force ratio of 1 extension worker for every 8,704 farm families. This is not adequate, but the suggested geographic distribution is such that a well trained force properly supported will make maximum impact on the agricultural sector for the money invested.

**STAFFING PATTERN AND COST ANALYSIS
OF AN EFFECTIVE EXTENSION SERVICE FOR SUDAN**

Proposed Staffing Pattern

The following proposed staffing pattern shows a geographic distribution of the field force that will give maximum country coverage for the budget expended. It should be noted that full advantage is taken of present facilities already constructed or to be constructed with funds already allocated. This capital investment is shown in the cost analyses and amortized in the recurrent budget.

Every effort has been made to make maximum use of present facilities and personnel.

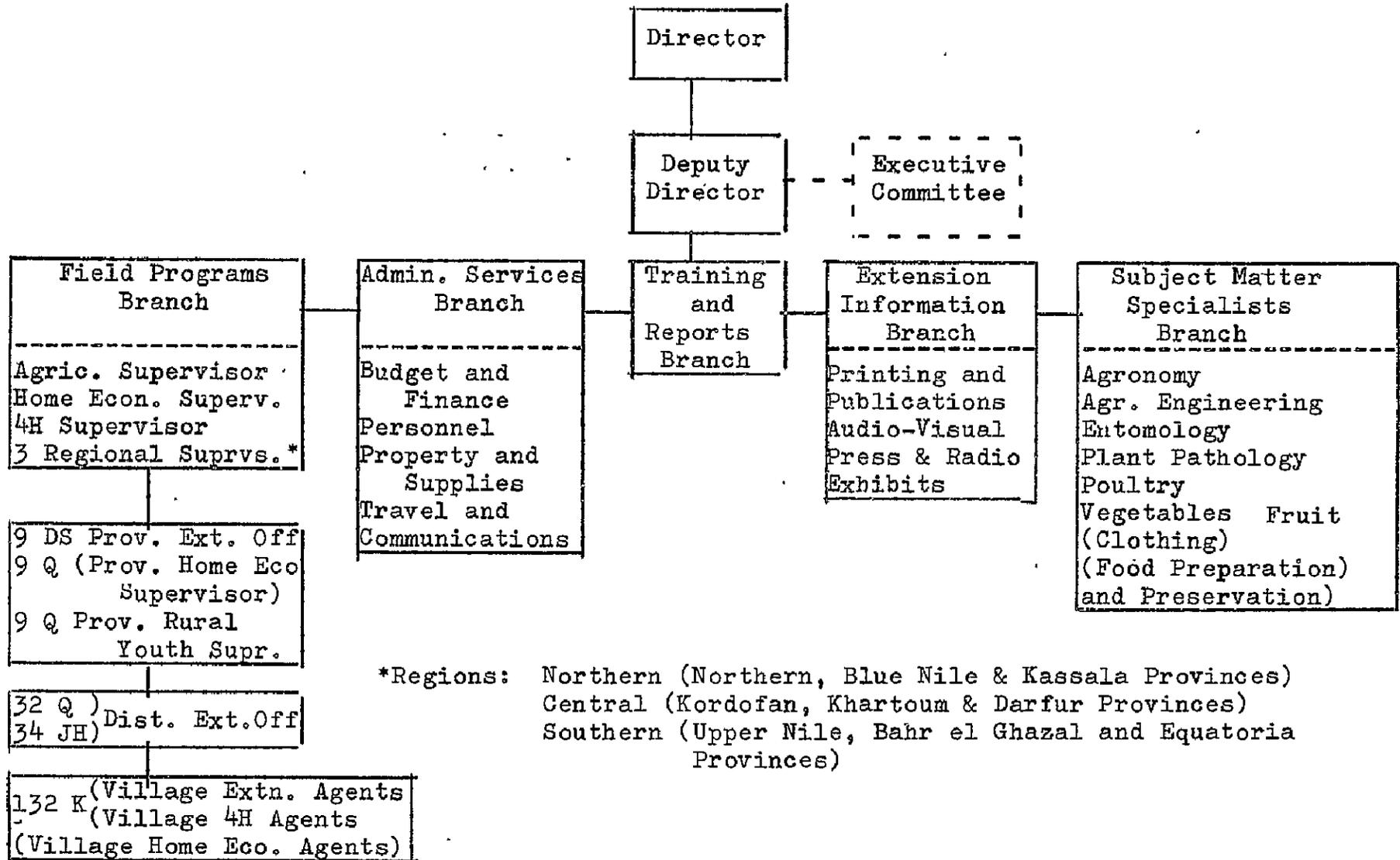
The staffing pattern as presented provides a complete service that can operate effectively without dependence on other Ministry services, and with progressively increasing efficiency will serve the agricultural sector for the next 15 to 20 years.

The reader will note there is no Home Economics field staff provided in the suggested staffing pattern. Home Economics is an integral part of any successful Extension Service. Because of the indigenous culture we recommend a survey be made before establishing the Home Economics part of the Service. In this way both geographic distribution and cost projection will be much more realistic. We emphasize that no Extension Service is complete without Home Economics.

It is strongly recommended that the headquarters staff be officed together in Khartoum. This can preferably be done in one section of the present Ministry building, or if need be in a separate building. No building cost or maintenance has been included. The cost of construction should be amortized over 20 years. This plus maintenance should be included in recurrent budget as has been done for the provincial offices.

Technical Field Staff Distribution

| | D/S | Q | J/E | K | |
|-----------------------------|-----|----|-----|-----|-----|
| Khartoum | 1 | 1 | 1 | 4 | 7 |
| Blue Nile (Sennar Training) | 2 | 3 | 5 | 16 | 26 |
| Kassala | 1 | 4 | 4 | 16 | 25 |
| Darfur | 1 | 4 | 4 | 16 | 25 |
| Northern | 1 | 4 | 4 | 16 | 25 |
| Kordofan | 1 | 4 | 4 | 16 | 25 |
| Equatoria | 1 | 4 | 4 | 16 | 25 |
| Bahr El Ghazal | 1 | 4 | 4 | 16 | 25 |
| Upper Nile | 1 | 4 | 4 | 16 | 25 |
| Total | 10 | 32 | 34 | 132 | 208 |



EXTENSION HEADQUARTERS

Staffing Pattern

1. Director's Office

| | | |
|-------|-----------------|----------------|
| S-VII | Director | LS 1,350.000 |
| B-2 | Deputy | 1,250.000 |
| J | 3 Senior Clerks | 540.000 |
| K | 2 Drivers | 216.000 |
| | 2 Messengers | <u>120.000</u> |
| Total | | LS 3,476.000 |

2. Field Programs Branch

| | | |
|-------|------------------------|----------------|
| B-1 | 3 National Supervisors | LS 3,150.000 |
| B-1 | 3 Regional Supervisors | 3,150.000 |
| J | 3 Senior Clerks | 540.000 |
| K | 3 Drivers | 324.000 |
| | 2 Messengers | <u>120.000</u> |
| Total | | LS 7,284.000 |

3. Administrative Services Branch

| | | |
|-------|------------------|----------------|
| B-1 | 1 Branch Chief | LS 1,050.000 |
| D/S | 4 Section Chiefs | 2,580.000 |
| J | 20 Senior Clerks | 3,600.000 |
| K | 1 Driver | 108.000 |
| | 2 Messengers | <u>120.000</u> |
| Total | | LS 7,458.000 |

4. Training and Reports Branch

| | | |
|-------|-------------------------|---------------|
| B-1 | 1 Branch Chief | LS 1,050.000 |
| D/S | 1 Reports Officer | 645.000 |
| D/S | 1 Field Studies Officer | 645.000 |
| Q | 2 Reports analysts | 700.000 |
| J | 4 Senior Clerks | 720.000 |
| K | 2 Drivers | 216.000 |
| | 1 Messenger | <u>60.000</u> |
| Total | | LS 4,041.000 |

5. Extension Information Branch

| | | |
|-----|---|--------------|
| B-1 | 1 Branch Chief | LS 1,050.000 |
| D/S | 1 Assistant Branch Chief (Production Center) | 850.000 |

5. Extension Information Branch (cont.)

| | | | |
|-----|---|----------------------|--------------|
| D/S | 3 | Section Chiefs | LS 1,935.000 |
| F | 1 | Darkroom Technician | 700.000 |
| Q | 2 | Offset Printers | 800.000 |
| Q | 1 | Silk Screen Operator | 350.000 |
| J | 3 | Senior Clerks | 540.000 |
| J | 1 | Mimeograph Operator | 180.000 |
| K | 1 | Driver - Operator | 150.000 |
| | 1 | Messenger - Helper | 100.000 |
| | | Total | LS 6,655.000 |

6. Subject Matter Specialists Branch

| | | | |
|-----|---|---------------------|--------------|
| B-1 | 1 | Branch Chief | LS 1,050.000 |
| D/S | 7 | Subject Specialists | 4,515.000 |
| J | 2 | Senior Clerks | 360.000 |
| K | 2 | Drivers | 216.000 |
| | 1 | Messenger | 60.000 |
| | | Total | LS 6,201.000 |
| | | Sub-Total | LS35,115.000 |

Office Equipment and Supplies (Headquarters)

1. Director's Office

| | | |
|----|--|--------------|
| 2 | Desk, five drawers | LS 26.000 |
| 2 | Chairs, desk | 20.000 |
| 3 | Desk, three drawers | 21.000 |
| 3 | Chairs, desk | 15.000 |
| 3 | Desk, typewriter | 12.000 |
| 1 | Storage cabinet and bookcase | 20.000 |
| 4 | Filing cabinet, steel | 72.000 |
| 6 | Lounge chairs | 90.000 |
| 15 | Chairs, straight | 30.000 |
| 1 | Conference table | 15.000 |
| 2 | Typewriters, Arabic | 178.000 |
| 1 | Typewriter, English | 58.000 |
| | Miscellaneous Office Supplies (Telephone, etc.) | 500.000 |
| | Total | LS 1,057.000 |

2. Field Programs Branch

| | | |
|---|---------------------|-----------|
| 6 | Desk, five drawers | LS 78.000 |
| 6 | Chairs, desk | 60.000 |
| 3 | Desk, three drawers | 21.000 |
| 3 | Chairs, desk | 15.000 |

2. Field Programs Branch (cont.)

| | | | |
|----|--|----|----------------|
| 3 | Desk, typewriter | LS | 12.000 |
| 3 | Storage cabinets and bookcase | | 60.000 |
| 6 | Filing cabinets, steel | | 108.000 |
| 12 | Lounge chairs | | 180.000 |
| 15 | Chairs, straight | | 30.000 |
| 2 | Typewriters, Arabic | | 178.000 |
| 1 | Typewriter, English | | 58.000 |
| 1 | Conference table | | 15.000 |
| 1 | Duplicating machine | | 71.000 |
| | Miscellaneous office supplies (Telephone, etc.) | | <u>700.000</u> |
| | Total | LS | 1,586.000 |

3. Administrative Services Branch

| | | | |
|----|--|----|---------------|
| 5 | Desk, five drawer | LS | 65.000 |
| 5 | Chairs, desk | | 50.000 |
| 10 | Desk, three drawer | | 70.000 |
| 10 | Chairs, desk | | 50.000 |
| 6 | Typewriters, Arabic | | 426.000 |
| 4 | Typewriters, English | | 232.000 |
| 1 | Duplicating machine (electric) | | 150.000 |
| 2 | Conference tables | | 30.000 |
| 20 | Chairs, straight | | 40.000 |
| 15 | Chairs, lounge | | 225.000 |
| 2 | Storage cabinet and bookcase | | 40.000 |
| 10 | Filing cabinets | | 180.000 |
| 1 | Calculator (electric) | | 150.000 |
| 2 | Adding machines | | 200.000 |
| | Miscellaneous office supplies (Telephone, etc.) | | 1,000.000 |
| 10 | Desks, typewriter | | <u>40.000</u> |
| | Total | LS | 2,938.000 |

4. Training and Reports Branch

| | | | |
|----|--|----|------------------|
| 3 | Desk, five drawers | LS | 39.000 |
| 6 | Desk, three drawers | | 42.000 |
| 5 | Chairs, desk | | 50.000 |
| 4 | Chairs, desk | | 20.000 |
| 2 | Typewriter desk | | 8.000 |
| 1 | Typewriter, Arabic | | 89.000 |
| 1 | Typewriter, English | | 58.000 |
| 6 | Chairs, lounge | | 90.000 |
| 15 | Chairs, straight | | 30.000 |
| 3 | Storage cabinets and bookcase | | 60.000 |
| 5 | Filing cabinets, steel | | 90.000 |
| 2 | Adding machine | | 200.000 |
| 1 | Calculator (electric) | | 150.000 |
| 1 | Duplicating machine, (electric) | | 150.000 |
| | Miscellaneous office supplies (Telephone, etc.) | | <u>1,000.000</u> |
| | Total | LS | 2,074.000 |

5. Extension Information Branch

a. Headquarters Staff

| | | | |
|----|-------------------------------|----|----------------|
| 3 | Bookcases | LS | 60.000 |
| 3 | Desk, five drawer | | 39.000 |
| 3 | Chairs, desk | | 30.000 |
| 4 | Desk, typewriter | | 8.000 |
| 2 | Chairs, typing | | 10.000 |
| 1 | Typewriter, Arabic | | 71.000 |
| 3 | Typewriter, English | | 164.000 |
| 1 | Conference Table | | 15.000 |
| 10 | Straight chairs | | 20.000 |
| 6 | Lounge chairs | | 90.000 |
| 3 | Storage cabinets | | 60.000 |
| 6 | Filing cabinets, steel | | 108.000 |
| 2 | Publication display racks | | 50.000 |
| | Miscellaneous office supplies | | <u>500.000</u> |
| | Total | LS | 1,225.000 |

b. Production Center, Khartoum North

| | | | |
|----|-------------------|--|--------|
| 1 | Desk, five drawer | | 13.000 |
| 1 | Chair, desk | | 10.000 |
| 3 | Desks, typing | | 12.000 |
| 3 | Chairs, typing | | 15.000 |
| 2 | Conference tables | | 30.000 |
| 10 | Straight chairs | | 20.000 |
| 3 | Storage cabinets | | 60.000 |
| 2 | Bookcases | | 40.000 |

b. Production Center (cont.)

| | | | |
|---|---------------------------|----|---------------|
| 2 | Filing cabinets, steel | LS | 36.000 |
| 2 | Publication display racks | | <u>50.000</u> |
| | Total | LS | 286.000 |

Production equipment & supplies for
offset printing, silk screen printing,
mimeograph reproduction, exhibit
construction & production, and
photographic production &
reproduction: LS20,000.000

Annual budget for supplies,
materials, and equipment maintenance
and repairs: 5,000.000

Total Information Branch LS26,511.000

6. Subject Matter Specialist Branch

| | | | |
|----|--|----|------------------|
| 8 | Desk, five drawers | LS | 104.000 |
| 8 | Chairs, desk | | 80.000 |
| 2 | Desk, three drawers | | 14.000 |
| 2 | Chairs, desk | | 10.000 |
| 2 | Desk, typewriters | | 8.000 |
| 1 | Typewriter, Arabic | | 89.000 |
| 1 | Typewriter, English | | 58.000 |
| 4 | Storage cabinets and bookcase | | 80.000 |
| 8 | Filing cabinets, steel | | 144.000 |
| 12 | Chairs, lounge | | 180.000 |
| 20 | Chairs, straight | | 40.000 |
| 1 | Calculator (electric) | | 150.000 |
| 1 | Adding machine | | 100.000 |
| 1 | Duplicating machine | | 71.000 |
| | Miscellaneous office supplies (Telephone, etc.) | | <u>1,000.000</u> |
| | Total | LS | 2,128.000 |

Transportation (Headquarters)

- Director's Office (12,000 miles/yr.)
 - cars (jeep station wagon or equivalent) LS 2,492.000
- Field Programs Branch (25,000 miles/yr.)
 - cars (jeep station wagon or equivalent) 3,738.000
- Administrative Services Branch (8,000 miles/yr.)
 - car (jeep station wagon or equivalent) 1,246.000

Transportation (Headquarters) - cont.

| | | |
|----|--|------------------|
| 4. | Training and Reports Branch (30,000 miles/yr.) | |
| | 2 cars (jeep station wagon or equivalent) | LS 2,492.000 |
| 5. | Extension Information Branch (60,000 mi/yr.) | |
| | 4 Cinema vans (jeep FCL70 van or equival.) | 16,000.000 |
| | 1 Truck (IHC Travelette SUT or equiv.) P.C. | 1,500.000 |
| | 1 Car (jeep station wagon or equivalent) Hdq | 1,246.000 |
| 6. | Subject Matter Specialist Branch (20,000 mi/yr.) | |
| | 2 cars (jeep station wagon or equivalent) | <u>2,492.000</u> |
| | Total | LS31,206.000 |

Recurrent Budget (Headquarters)

Salaries

| | |
|----------------------------------|------------------|
| Director's Office | LS 3,476.000 |
| Field Program Branch | 7,284.000 |
| Administrative Service Branch | 7,458.000 |
| Training and Reports Branch | 4,041.000 |
| Extension Information Branch | 6,655.000 |
| Subject Matter Specialist Branch | <u>6,201.000</u> |
| Total | LS35,115.000 |

Transportation

| | |
|---|------------------|
| Operations - 155,000 miles | |
| Fuel 15,000 gals @ 20 P.T. | LS 3,000.000 |
| Maintenance, replacement & repairs (LS35/car/mon.) | <u>6,720.000</u> |
| Total | LS 9,720.000 |

| | |
|---|---------------------|
| <u>Office Equipment replacement, maintenance, telephone, etc.</u> | <u>LS 9,700.000</u> |
|---|---------------------|

Sub-total LS54,535.000

| <u>Province</u> | <u>Estimated Extension</u> | <u>Recurrent Budget</u> |
|-----------------|--------------------------------|-------------------------|
| Kordofan | LS 43,084.000 | LS 12,903.000 |
| Northern | 60,864.000 | 13,792.000 |
| Darfur | 43,084.000 | 12,903.000 |
| Kassala | 60,864.000 | 13,792.000 |
| Blue Nile | 71,733.000 | 16,158.000 |
| Bahr El Ghazal | 43,249.000 | 12,911.000 |
| Khartoum | 29,561.000 | 6,972.000 |
| Equatoria | 35,162.000 | 12,487.000 |
| Upper Nile | 44,322.000 | 13,391.000 |
| Totals | LS 431,923.000 | LS 114,929.000 |
| | (\$ 1,291,357) | (\$ 397,648) |

EXTENSION SERVICE, KORDOFAN PROVINCE

Staffing Pattern

1. El Obeid

| | |
|-------------------------------------|------------|
| 1 Provincial Extension Officer (DS) | LS 645.000 |
| 1 Provincial 4-H Agent (Q) | 350.000 |
| 1 Jr. Extensionist (JH) | 240.000 |
| 1 Senior Clerk (J) | 180.000 |
| 2 Drivers | 360.000 |
| 1 Messenger | 60.000 |
| 4 Local Extensionist (K) | 432.000 |

Total LS 2,267.000

2. Kadugla

| | |
|----------------------------------|------------|
| 1 District Extension Officer (Q) | LS 350.000 |
| 1 Jr. Extensionist (JH) | 240.000 |
| 1 Driver | 180.000 |
| 1 Messenger | 60.000 |
| 4 Local Extensionist (K) | 432.000 |

Total LS 1,262.000

3. Dilling

Same as Kadugla LS 1,262.000

4. El Fula

Same as Kadugla LS 1,262.000

Sub-total LS 6,053.000

Buildings and Houses (Kordofan Province)

| | | |
|-------------------------------|-----------|------------------|
| 1. El Obeid | | |
| Office building and show room | LS | 5,000.000 |
| 1 Sr. Standard house | | 4,000.000 |
| 1 Middle Standard house | | 2,500.000 |
| 1 Jr. Standard house | | <u>2,000.000</u> |
| | Total | LS 13,500.000 |
| 2. Kadugla | | |
| 1 Middle Standard house | LS | 2,500.000 |
| 1 Jr. Standard house | | <u>2,000.000</u> |
| | Total | LS 4,500.000 |
| 3. Dilling | | |
| Same as Kadugla | LS | 4,500.000 |
| 4. El Fula | | |
| Same as Kadugla | LS | <u>4,500.000</u> |
| | Sub-total | LS 27,000.000 |

Office Equipment, Furniture, and Supplies

| | | |
|------------------------------------|-------|----------------|
| 1. El Obeid | | |
| 2 large desks (5 drawer) | LS | 26.000 |
| 2 medium size desks (3 drawer) | | 14.000 |
| 3 desk chairs | | 30.000 |
| 2 typewriter desks | | 8.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| 15 straight chairs | | 30.000 |
| 1 filing cabinet (steel, 4 drawer) | | 18.000 |
| 1 typewriter, Arabic | | 89.000 |
| 1 typewriter, English | | 58.000 |
| 1 duplicating machine | | 71.000 |
| 1 large conference table | | 12.000 |
| miscellaneous office supplies | | <u>100.000</u> |
| | Total | LS 471.000 |
| 2. Kadugla | | |
| 1 large desk (5 drawer) | LS | 13.000 |
| 1 medium size desk (3 drawer) | | 7.000 |
| 2 desk chairs | | 20.000 |
| 1 conference table (medium size) | | 8.000 |
| 10 straight chairs | | <u>20.000</u> |

| | | | |
|----|-------------------------------|-----------|----------------|
| 2. | Kadugla (cont.) | | |
| | 1 storage cabinet (5 shelves) | LS | 15.000 |
| | miscellaneous office supplies | | <u>50.000</u> |
| | | Total | LS 133.000 |
| 3. | Dilling | | |
| | Same as Kadugla | LS | 133.000 |
| 4. | El Fula | | |
| | Same as Kadugla | <u>LS</u> | <u>133.000</u> |
| | | Sub-total | LS 870.000 |

Transportation (Kordofan Province)

| | | | |
|----|---|-----------|------------------|
| 1. | El Obeid | | |
| | 2 cars (jeep station wagon or equivalent) | LS | 2,492.000 |
| 2. | Kadugla | | |
| | 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 3. | Dilling | | |
| | 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 4. | El Fula | | |
| | 1 car (jeep station wagon or equivalent) | <u></u> | <u>1,246.000</u> |
| | | Sub-total | LS 6,230.000 |

Visual Aid Equipment and Supplies

| | | | |
|---|-----------------------------|-------------|---------------|
| 4 | 16 mm movie projector | \$ | 4,000.00 |
| 4 | 3½ KW generators | | 1,200.00 |
| 4 | electric slide & film proj. | | 400.00 |
| 4 | large projector screens | | 300.00 |
| 4 | small projector screens | | 200.00 |
| 4 | cameras (120 or 127) | | 200.00 |
| | miscellaneous supplies | <u></u> | <u>200.00</u> |
| | | \$ 6,500.00 | LS 2,253.000 |

Demonstration Equipment

| | | | |
|---|--------------------------------|----|-------|
| 8 | pruning saws (small) | \$ | 40.00 |
| 8 | lapping shears (24 or 26 inch) | | 48.00 |
| 8 | hand pruning shears (8 inch) | | 20.00 |

Demonstration Equipment (Kordofan Province) - cont.

| | | | | |
|----|--|----|----------|------------|
| 8 | back pack sprays | \$ | 320.00 | |
| 1 | Bostrom Farm level, tripod, rod, target | | 100.00 | |
| 75 | garden (bow) rakes, 4-H | | 131.50 | |
| 75 | garden hoes, 4-H | | 150.00 | |
| 75 | spading forks, 4-H | | 225.00 | |
| 2 | cross-cut hand saws (10 point) | | 7.50 | |
| 2 | jack planes (11½ inch) | | 15.00 | |
| 2 | combination squares | | 3.00 | |
| 2 | steel tapes, in steel case | | 26.00 | |
| 2 | nail claw hammers | | 6.00 | |
| | | \$ | 1,092.00 | LS 378.000 |

Demonstration Materials

| | | | | |
|------|--------------------------------------|----|------------|---------------|
| 1000 | pounds treble-superphosphate | | | LS 15.000 |
| 1000 | pounds sulfate of ammonium | | | 15.900 |
| 500 | pounds sulfate of potash | | | 9.100 |
| 400 | pounds, DDT (50% or 75% wettable) |) | | |
| 200 | pounds, BHC |) | | |
| 8 | gallons, malathion (57% conc. emul.) |) | | |
| 100 | pounds, dieldrin (wettable powder) |) | 250.000 | |
| 100 | pounds, sevin |) | | |
| 100 | pounds, metallic copper (50%) |) | | |
| 100 | pounds, wettable sulfur |) | | |
| | garden seed (4-H) | | | <u>10.000</u> |
| | Total | LS | 300.000 | |
| | Sub-total | LS | 2,931.000 | |
| | Grand Total | LS | 43,084.000 | |

' RECURRENT BUDGET' - KORDOFAN PROVINCE

Personnel (Salaries)

| | | | |
|----|-----------------------------------|----|------------------|
| 1 | Provincial Extension Officer (DS) | LS | 645.000 |
| 3 | District Extension Officers (Q) | | 1,050.000 |
| 1 | Provincial 4-H Agent (Q) | | 350.000 |
| 4 | Jr. Extensionist (JH) | | 960.000 |
| 1 | Senior Clerk (JJ) | | 180.000 |
| 5 | Drivers | | 900.000 |
| 4 | Messengers | | 240.000 |
| 16 | Local Extensionist (K) | | <u>1,728.000</u> |
| | Total | LS | 6,053.000 |

Buildings

| | | |
|--------------|-------|------------------|
| Amortization | LS | 1,350.000 |
| Maintenance | | <u>2,000.000</u> |
| | Total | LS 3,350.000 |

Transportation

| | | |
|-------------------------------------|-------|------------------|
| Operations | | |
| Fuel | LS | 1,200.000 |
| Maintenance repairs and replacement | | <u>2,100.000</u> |
| | Total | LS 3,300.000 |

Demonstration Equipment and Material,
Visual aid, office supplies, and 4-H
Garden Seed

LS 200.000

Sub-total LS 12,903.000

EXTENSION SERVICE, NORTHERN PROVINCE

Staffing Pattern

| | | |
|-------------------------------------|-----------|--------------|
| 1. Ed Damer | | |
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 4 Local Extensionist (K) | | 432.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 2 Drivers | | 360.000 |
| 1 Messenger | | 60.000 |
| | Total | LS 2,267.000 |
| 2. Shendi | | |
| 1 District Extension Officer (Q) | LS | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Driver | | 180.000 |
| 1 Messenger | | 60.000 |
| 4 Local Extensionist (K) | | 432.000 |
| | Total | LS 1,262.000 |
| 3. El Banga | | |
| Same as Shendi | LS | 1,262.000 |
| 4. Merowe | | |
| Same as Shendi | LS | 1,262.000 |
| | Sub-total | LS 6,053.000 |

Buildings and Houses

| | | |
|-------------------------------|-------|---------------|
| 1. Ed Damer | | |
| 1 Office building - show room | LS | 6,500.000 |
| 1 Senior standard house | | 6,000.000 |
| 1 Middle standard house | | 4,070.000 |
| 1 Junior standard house | | 4,000.000 |
| | Total | LS 20,570.000 |
| 2. Shendi | | |
| 1 Middle standard house | LS | 4,070.000 |
| 1 Junior standard house | | 4,000.000 |
| | Total | LS 8,070.000 |

| | | |
|----|----------------|---------------|
| 3. | El Banga | |
| | Same as Shendi | LS 8,070.000 |
| 4. | Merowe | |
| | Same as Shendi | LS 8,070.000 |
| | Sub-total | LS 44,780.000 |

Office Equipment, Furniture and Supplies

| | | |
|----|-----------------------------------|------------|
| 1. | Ed Damer | |
| | 2 large desks (5 drawer) | LS 26.000 |
| | 2 medium size desks (3 drawer) | 14.000 |
| | 2 typewriter desks | 8.000 |
| | 3 desk chairs | 30.000 |
| | 1 storage cabinet (5 shelves) | 15.000 |
| | 15 straight chairs | 30.000 |
| | 1 filing cabinet (steel 4 drawer) | 18.000 |
| | 1 typewriter, Arabic | 89.000 |
| | 1 typewriter, English | 58.000 |
| | 1 duplicating machine | 71.000 |
| | 1 large conference table | 12.000 |
| | miscellaneous office supplies | 100.000 |
| | Total | LS 471.000 |
| 2. | Shendi | |
| | 1 large desk (5 drawer) | LS 13.000 |
| | 1 medium size desk (3 drawer) | 7.000 |
| | 2 desk chairs | 20.000 |
| | 1 conference table (medium size) | 8.000 |
| | 10 straight chairs | 20.000 |
| | 1 storage cabinet (5 shelves) | 15.000 |
| | miscellaneous office supplies | 50.000 |
| | Total | LS 133.000 |
| 3. | El Banga | |
| | Same as Shendi | LS 133.000 |
| 4. | Merowe | |
| | Same as Shendi | LS 133.000 |
| | Sub-total | LS 870.000 |

Transportation (Northern Province)

| | | |
|---|-------|------------------|
| 1. Ed Damer | | |
| 2 cars (jeep station wagon or equivalent) | LS | 2,492.000 |
| 2. Shendi | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 3. El Banga | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 4. Merowe | | |
| 1 car (jeep station wagon or equivalent) | | <u>1,246.000</u> |
| | Total | LS 6,230.000 |

Visual Aid Equipment and Supplies

| | | |
|---------------------------------|---------------|---------------------------|
| 4 16 mm movie projector | \$ 4,000.00 | |
| 4 3½ KW generators | 1,200.00 | |
| 4 electric slide & film projts. | 400.00 | |
| 4 large projector screens | 300.00 | |
| 4 small projector screens | 200.00 | |
| 4 cameras (120 or 127) | 200.00 | |
| miscellaneous supplies | <u>200.00</u> | |
| | Total | \$ 6,500.00 LS 12,253.000 |

Demonstration Equipment

| | | |
|----------------------------------|-------------|------------------------|
| 8 pruning saws (small) | \$ 40.00 | |
| 8 lopping shears (24 or 26 inch) | 48.00 | |
| 8 hand pruning shears (8 inch) | 20.00 | |
| 8 back pack sprays | 320.00 | |
| 1 Bostrom farm level, tripod | 100.00 | |
| 75 garden bow rakes, 4-H | 131.50 | |
| 75 garden hoes, 4-H | 150.00 | |
| 75 spading forks, 4-H | 225.00 | |
| 2 cross-cut hand saws (10 point) | 7.50 | |
| 2 jack plane (11½ inch) | 15.00 | |
| 2 combination squares | 3.00 | |
| 2 steel tapes, in steel case | 26.00 | |
| 2 nail claw hammer | <u>6.00</u> | |
| | Total | \$ 1,092.00 LS 378.000 |

Demonstration Materials

| | | |
|-----------------------------------|----|--------|
| 1000 pounds treble-superphosphate | LS | 15.000 |
| 1000 pounds sulfate ammonium | | 15.900 |
| 500 pounds sulfate of potash | | 9.100 |

Demonstration Materials (cont.)

| | | |
|--|----|---------------|
| 400 pounds, DDT (50% or 75% wettable) |) | |
| 200 pounds, BHC |) | |
| 8 gallons, malathion (57% conc. emul.) |) | |
| 100 pounds, dieldrin |) | LS 250.000 |
| 100 pounds, sevin |) | |
| 100 pounds, metallic copper (50%) |) | |
| 100 pounds, wettable sulfur |) | |
| garden seed, 4-H |) | <u>10.000</u> |
| Total | LS | 300.000 |
| Sub-total | LS | 2,931.000 |
| Grand Total | LS | 60,864.000 |

RECURRENT BUDGET - NORTHERN PROVINCE

Personnel (Salaries)

| | | |
|-------------------------------------|----|------------------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 3 District Extension Officers. (Q) | | 1,050.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 4 Jr. Extensionist (JH) | | 960.000 |
| 1 Senior Clerk (JJ) | | 180.000 |
| 5 Drivers | | 900.000 |
| 4 Messengers | | 240.000 |
| 16 Local extensionist (K) | | <u>1,728.000</u> |
| Total | LS | 6,053.000 |

Buildings

| | | |
|--------------|----|------------------|
| Amortization | LS | 2,239.000 |
| Maintenance | | <u>2,000.000</u> |
| Total | LS | 4,239.000 |

Transportation

| | | |
|------------------------------------|----|------------------|
| Operation | | |
| Fuel | LS | 1,200.000 |
| Maintenance repair and replacement | | <u>2,100.000</u> |
| Total | LS | 3,300.000 |

Demonstration equipment, material, visual aid, garden seed (4-H) and office supplies

LS 200.000

Grand Total LS 13,792.000

EXTENSION SERVICE, DARFUR PROVINCE

Staffing Pattern

| | | |
|-------------------------------------|----|-----------|
| 1. El Fasher | | |
| 1 Provincial extension officer (DS) | LS | 645.000 |
| 1 Provincial 4-H agent (Q) | | 350.000 |
| 1 Jr. extensionist (JH) | | 240.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 4 Local extensionist (K) | | 432.000 |
| 2 Drivers | | 360.000 |
| 1 Messenger | | 60.000 |
| | | 60.000 |
| Total | LS | 2,267.000 |
| 2. El Geneina | | |
| 1 District extension officer (Q) | LS | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 4 Local extensionist (JH) | | 432.000 |
| 1 Driver | | 180.000 |
| 1 Messenger | | 60.000 |
| | | 60.000 |
| Total | LS | 1,262.000 |
| 3. Nyala | | |
| Same as El Geneina | LS | 1,262.000 |
| 4. Zalingei | | |
| Same as El Geneina | LS | 1,262.000 |
| | | 1,262.000 |
| Sub-total | LS | 6,053.000 |

Buildings and Houses

| | | |
|-------------------------|----|------------|
| 1. El Fasher | | |
| 1 Office show room | LS | 5,000.000 |
| 1 Senior standard house | | 4,000.000 |
| 1 Middle standard house | | 2,500.000 |
| 1 Junior standard house | | 2,000.000 |
| | | 2,000.000 |
| Total | LS | 13,500.000 |
| 2. El Geneina | | |
| 1 Middle standard house | LS | 2,500.000 |
| 1 Junior standard house | | 2,000.000 |
| | | 2,000.000 |
| Total | LS | 4,500.000 |

| | | |
|--------------------|-----------|------------------|
| 3. Nyala | | |
| Same as El Geneina | LS | 4,500.000 |
| 4. Zalingei | | |
| Same as El Geneina | LS | <u>4,500.000</u> |
| | Sub-total | LS 27,000.000 |

Office Equipment, Furniture, and Supplies (Darfur)

| | | |
|------------------------------------|-----------|----------------|
| 1. El Fasher | | |
| 2 large desks (5 drawer) | LS | 26.000 |
| 2 medium size desks | | 14.000 |
| 3 desk chairs | | 30.000 |
| 2 typewriter desks | | 8.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| 15 straight chairs | | 30.000 |
| 1 filing cabinet (steel, 4 drawer) | | 18.000 |
| 1 typewriter, Arabic | | 89.000 |
| 1 typewriter, English | | 58.000 |
| 1 duplicating machine | | 71.000 |
| 1 conference table (large) | | 12.000 |
| miscellaneous office supplies | | <u>100.000</u> |
| | Total | LS 471.000 |
| 2. El Geneina | | |
| 1 large desk (5 drawer) | LS | 13.000 |
| 1 medium desk (3 drawer) | | 7.000 |
| 2 desk chairs | | 20.000 |
| 1 conference table (medium size) | | 8.000 |
| 10 straight chairs | | 20.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| miscellaneous office supplies | | <u>50.000</u> |
| | Total | LS 133.000 |
| 3. Nyala | | |
| Same as El Geneina | LS | 133.000 |
| 4. Zalingei | | |
| Same as El Geneina | LS | <u>133.000</u> |
| | Sub-total | LS 870.000 |

Transportation

| | | |
|---|----|-----------|
| 1. El Fasher | | |
| 2 cars (jeep station wagon or equivalent) | LS | 2,492.000 |

Transportation (Darfur Province) - cont.

| | | |
|--|-------|------------------|
| 2. El Geneina | | |
| 1 car (jeep station wagon or equivalent) | LS | 1,246.000 |
| 3. Nyala | | |
| 1 car (jeep station wagon or equivalent) | LS | 1,246.000 |
| 4. Zalingei | | |
| 1 car (jeep station wagon or equivalent) | LS | <u>1,246.000</u> |
| | Total | LS 6,230.000 |

Visual Aid Equipment and Supplies

| | | | |
|-----------------------------------|----|---------------|--------------|
| 4 16 mm movie projectors | \$ | 4,000.00 | |
| 4 3½ KW generators | | 1,200.00 | |
| 4 electric slide and film projcs. | | 400.00 | |
| 4 large projector screens | | 300.00 | |
| 4 small projector screens | | 200.00 | |
| 4 cameras (120 or 127) | | 200.00 | |
| miscellaneous supplies | | <u>200.00</u> | |
| | \$ | 6,500.00 | LS 2,253.000 |

Demonstration Equipment

| | | | |
|-----------------------------------|----|-------------|------------|
| 8 pruning saws (small) | \$ | 40.00 | |
| 8 lopping shears (24 or 26 inch) | | 48.00 | |
| 8 hand pruning shears (8 inch) | | 20.00 | |
| 8 back pack sprays | | 320.00 | |
| 1 farm level, tripod, rod, target | | 100.00 | |
| 75 garden (bow) rakes, 4-H | | 131.50 | |
| 75 garden hoes, 4-H | | 150.00 | |
| 75 spading forks, 4-H | | 225.00 | |
| 2 cross-cut hand saws (10 point) | | 7.50 | |
| 2 jack planes (11½ inch) | | 15.00 | |
| 2 combination squares | | 3.00 | |
| 2 steel tapes, in steel case | | 26.00 | |
| 2 nail claw hammers | | <u>6.00</u> | |
| | \$ | 1,092.00 | LS 378.000 |

Demonstration Material

| | | |
|------------------------------------|----|--------|
| 1000 pounds, treble-superphosphate | LS | 15.000 |
| 1000 pounds, sulfate of ammonium | | 15.900 |
| 500 pounds, sulfate of potash | | 9.100 |

Demonstration Material (cont.)

| | | |
|---|----|---------------|
| 400 pounds, DDT (50% or 75% wettable) |) | |
| 200 pounds, Malathion (57% conc. emul.) |) | |
| 100 pounds, dieldrin |) | LS 250.000 |
| 100 pounds, sevin |) | |
| 100 pounds, metallic copper (50%) |) | |
| 100 pounds, wettable sulfur |) | |
| 4-H garden seed | | <u>10.000</u> |
| Total | LS | 300.000 |
| Sub-total | LS | 2,931.000 |
| Grand Total | LS | 43,084.000 |

RECURRENT BUDGET - DARFUR PROVINCE

Personnel (Salaries)

| | | |
|-------------------------------------|----|------------------|
| 1 Provincial extension officer (DS) | LS | 645.000 |
| 3 District extension officers (Q) | | 1,050.000 |
| 1 Provincial 4-H agent (Q) | | 350.000 |
| 4 Jr. extensionist (JH) | | 960.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 5 Drivers | | 900.000 |
| 4 Messengers | | 240.000 |
| 16 Local extensionist (K) | | <u>1,728.000</u> |
| Total | LS | 6,053.000 |

Buildings

| | | |
|--------------|----|------------------|
| Amortization | LS | 1,350.000 |
| Maintenance | | <u>2,000.000</u> |
| Total | LS | 3,350.000 |

Transportation

| | | |
|-----------------------------------|----|------------------|
| Operation | | |
| Fuel | LS | 1,200.000 |
| Maintenance repair and replacment | | <u>2,100.000</u> |
| Total | LS | 3,300.000 |

Demonstration equipment and material, visual aid, office supplies, and 4-H garden seed

| | | |
|-----------|----|----------------|
| | LS | <u>200.000</u> |
| Sub-total | LS | 12,903.000 |

EXTENSION SERVICE, KASSALA PROVINCE

Staffing Pattern

| | | |
|-------------------------------------|----|------------------|
| 1. Kassala | | |
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Clerk (J) | | 180.000 |
| 2 Drivers | | 360.000 |
| 1 Messenger | | 60.000 |
| 4 Local Extensionists (K) | | <u>432.000</u> |
| Total | LS | 2,267.000 |
| 2. Khashm El Girba | | |
| 1 District Extension Officer (Q) | LS | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Driver | | 180.000 |
| 1 Messenger | | 60.000 |
| 4 Local Extensionists (J) | | <u>432.000</u> |
| Total | LS | 1,262.000 |
| 3. Gedaref | | |
| Same as Khashm El Girba | LS | 1,262.000 |
| 4. Erkowit | | |
| Same as Khashm El Girba | LS | <u>1,262.000</u> |
| Sub-total | LS | 6,053.000 |

Buildings and Houses

| | | |
|-------------------------------|----|------------------|
| 1. Kassala | | |
| Office building and show room | LS | 6,500.000 |
| 1 Senior standard house | | 6,000.000 |
| 1 middle standard house | | 4,070.000 |
| 1 junior standard house | | <u>4,000.000</u> |
| Total | LS | 20,570.000 |
| 2. Khashm El Girba | | |
| middle standard house | LS | 4,070.000 |
| junior standard house | | <u>4,000.000</u> |
| Total | LS | 8,070.000 |

| | | |
|-------------------------|-----------|------------------|
| 3. Gedaref | | |
| Same as Khashm El Girba | LS | 8,070.000 |
| 4. Erkowit | | |
| Same as Khashm El Girba | LS | <u>8,070.000</u> |
| | Sub-total | LS 44,780.000 |

Office Equipment, Furniture and Supplies

| | | |
|------------------------------------|-----------|----------------|
| 1. Kassala | | |
| 2 large desks (5 drawer) | LS | 26.000 |
| 2 medium size desks (3 drawer) | | 14.000 |
| 3 desk chairs | | 30.000 |
| 2 typewriter desks | | 8.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| 15 straight chairs | | 30.000 |
| 1 filing cabinet (steel, 4 drawer) | | 18.000 |
| 1 typewriter, Arabic | | 89.000 |
| 1 typewriter, English | | 58.000 |
| 1 duplicating machine | | 71.000 |
| 1 large conference table | | 12.000 |
| miscellaneous office supplies | | <u>100.000</u> |
| | Total | LS 471.000 |
| 2. Khashm El Girba | | |
| 1 large desk (5 drawer) | LS | 13.000 |
| 1 medium size desk (3 drawer) | | 7.000 |
| 2 desk chairs | | 20.000 |
| 1 medium size conference table | | 8.000 |
| 10 straight chairs | | 20.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| miscellaneous office supplies | | <u>50.000</u> |
| | Total | LS 133.000 |
| 3. Gedaref | | |
| Same as Khashm El Girba | LS | 133.000 |
| 4. Erkowit | | |
| Same as Khashm El Girba | LS | <u>133.000</u> |
| | Sub-total | LS 870.000 |

Transportation

| | | |
|--|----|-----------|
| 1. Kassala | | |
| 2 cars. (jeep station wagon or equivalent) | LS | 2,492.000 |

| | | | |
|----|--|----|------------------|
| 2. | Khashm El Girba | | |
| | 1 car (jeep station wagon or equivalent) | LS | 1,246.000 |
| 3. | Gedaref | | |
| | 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 4. | Erkowit | | |
| | 1 car (jeep station wagon or equivalent) | | <u>1,246.000</u> |
| | Total | LS | 6,230.000 |

Visual Aid Equipment and Supplies (Kassala Province)

| | | | | |
|---|-----------------------------|----|-----------------|--------------|
| 4 | 16 mm movie projectors | \$ | 4,000.00 | |
| 4 | 3½ KW generators | | 1,200.00 | |
| 4 | electric slide & film proj. | | 400.00 | |
| 4 | large projector screens | | 300.00 | |
| 4 | small projector screens | | 200.00 | |
| 4 | cameras (120 or 127) | | 200.00 | |
| | miscellaneous supplies | | 200.00 | |
| | Total | \$ | <u>6,500.00</u> | LS 2,253.000 |

Demonstration Equipment

| | | | | |
|----|--|----|-----------------|------------|
| 8 | pruning saws (small) | \$ | 40.00 | |
| 8 | lopping shears (24 or 26 inch) | | 48.00 | |
| 8 | hand pruning shears (8 inch) | | 20.00 | |
| 8 | back pack sprays | | 320.00 | |
| 1 | Bostrom farm level, tripod, rod target | | 100.00 | |
| 75 | garden (bow) rakes, 4-H | | 131.50 | |
| 75 | garden hoes, 4-H | | 150.00 | |
| 75 | spading forks | | 225.00 | |
| 2 | cross-cut hand saws | | 7.50 | |
| 2 | jack planes (11½ inch) | | 15.00 | |
| 2 | combination squares | | 3.00 | |
| 2 | steel tapes, in steel case | | 26.00 | |
| 2 | nail claw hammers | | 6.00 | |
| | Total | \$ | <u>1,092.00</u> | LS 378.000 |

Demonstration Material

| | | | | |
|------|--------------------------------------|----|----------------|--|
| 1000 | pounds treble-superphosphate | LS | 15.000 | |
| 1000 | pounds sulfate of ammonium | | 15.900 | |
| 500 | pounds sulfate of potash | | 9.100 | |
| 400 | pounds, DDT (50% or 75% wettable) |) | | |
| 200 | pounds, BHC |) | | |
| 8 | gallons, malathion (57% conc. emul.) |) | | |
| 100 | pounds, dieldrin |) | 250.000 | |
| 100 | pounds, sevin |) | | |
| 100 | pounds, metallic copper (50%) |) | | |
| 100 | pounds, wettable sulfur |) | | |
| | garden seed, 4-H | | <u>10.000</u> | |
| | Total | LS | <u>300.000</u> | |
| | Sub-total | LS | 2,931.000 | |
| | Grand Total | LS | 60,864.000 | |

RECURRENT BUDGET - KASSALA PROVINCE

Personnel (Salaries)

| | | |
|-------------------------------------|-------|---------------------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 3 District Extension Officers (Q) | | 1,050.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 4 Jr. Extensionist (JH) | | 960.000 |
| 1 Clerk (JJ) | | 180.000 |
| 5 Drivers | | 900.000 |
| 4 Messengers | | 240.000 |
| 16 Local Extensionists (J) | | <u>1,728.000</u> |
| | Total | LS <u>6,053.000</u> |

Buildings

| | | |
|--------------|-------|---------------------|
| Amortization | LS | 2,239.000 |
| Maintenance | | <u>2,000.000</u> |
| | Total | LS <u>4,239.000</u> |

Transportation

| | | |
|-------------------------------------|-------|---------------------|
| Operation | | |
| Fuel | LS | 1,200.000 |
| Maintenance, repair and replacement | | <u>2,100.000</u> |
| | Total | LS <u>3,300.000</u> |

| | | |
|---|-----------|----------------------|
| Demonstration equipment and material, visual aid, office supplies and 4-H Garden Seed | LS | <u>200.000</u> |
| | Sub-total | LS <u>13,792.000</u> |

EXTENSION SERVICE, BLUE NILE PROVINCE

Staffing Pattern

| | | |
|---|----|------------------|
| 1. Wad Medani | | |
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial Youth Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 4 Local Extensionists (K) | | 432.000 |
| 1 Clerk (JJ) | | 180.000 |
| 2 Drivers | | 360.000 |
| 1 Messenger | | 60.000 |
| Total | LS | <u>2,267.000</u> |
| 2. Sennar - Training Center | | |
| 1 District Ext. & Training Officer (DS) | LS | 645.000 |
| 2 Extensionists (JH) | | 350.000 |
| 2 Drivers | | 360.000 |
| 4 Local Extensionists (K) | | 432.000 |
| 1 Messenger | | 60.000 |
| 1 Clerk | | 180.000 |
| Total | LS | <u>2,027.000</u> |
| 3. Kosti | | |
| 1 District Extension Officer (Q) | LS | 350.000 |
| 1 Extensionist (JH) | | 240.000 |
| 1 Driver | | 180.000 |
| 1 Messenger | | 60.000 |
| 4 Local Extensionists (K) | | 432.000 |
| Total | LS | <u>1,262.000</u> |
| 4. Singa | | |
| Same as Kosti | LS | <u>1,262.000</u> |
| Sub-total | LS | 6,818.000 |

Buildings and Houses

| | | |
|-----------------------------|----|-------------------|
| 1. Wad Medani | | |
| Office building, show room | LS | 6,500.000 |
| 1 senior standard house | | 5,900.000 |
| 1 middle standard house | | 4,500.000 |
| 1 junior standard house | | 3,000.000 |
| Total | LS | <u>19,900.000</u> |
| 2. Sennar - Training Center | | |
| 1 Office building | LS | 6,500.000 |
| 1 senior standard house | | 5,900.000 |
| 2 junior standard houses | | 6,000.000 |
| Total | LS | <u>18,400.000</u> |
| 3. Kosti | | |
| 1 middle standard house | LS | 4,500.000 |
| 1 junior standard house | | 3,000.000 |
| Total | LS | <u>7,500.000</u> |

| | | |
|---------------|-----------|---------------|
| 4. Singa | | |
| Same as Kosti | | LS 7,500.000 |
| | Sub-total | LS 53,300.000 |

Office Equipment, Furniture and Supplies

| | | |
|------------------------------------|-----------|--------------|
| 1. Wad Medani | | |
| 2 large desks (5 drawer) | LS | 26.000 |
| 2 medium size desks (3 drawer) | | 14.000 |
| 2 typewriter desks | | 8.000 |
| 3 desk chairs | | 30.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| 15 straight chairs | | 30.000 |
| 1 filing cabinet (steel, 4 drawer) | | 18.000 |
| 1 typewriter, Arabic | | 89.000 |
| 1 typewriter, English | | 58.000 |
| 1 duplicating machine | | 71.000 |
| 1 large conference table | | 12.000 |
| miscellaneous office supplies | | 100.000 |
| | Total | LS 471.000 |
| 2. Sennar - Training Center | | |
| Same as for Wad Medani | LS | 471.000 |
| 3. Kosti | | |
| 1 large desk | LS | 13.000 |
| 1 Medium desk | | 7.000 |
| 2 desk chairs | | 20.000 |
| 1 conference table (medium size) | | 8.000 |
| 10 straight chairs | | 20.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| miscellaneous office supplies | | 50.000 |
| | Total | LS 133.000 |
| 4. Singa | | |
| Same as for Kosti | LS | 133.000 |
| | Sub-total | LS 1,208.000 |

Transportation

| | | |
|--|-------|--------------|
| 1. Wad Medani | | |
| 2 cars (jeep station wagons or equivalent) | LS | 2,492.000 |
| 2. Sennar | | |
| 2 cars (jeep station wagons or equivalent) | | 2,492.000 |
| 3. Kosti | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 4. Singa | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| | Total | LS 7,476.000 |

Visual Aid Equipment and Supplies (Blue Nile Province)

| | | | |
|---|-----------------------------|-------------|--------------|
| 4 | 16mm movie projectors | \$ 4,000.00 | |
| 4 | 3½ KW generators | 1,200.00 | |
| 4 | electric slide & film proj. | 400.00 | |
| 4 | large projector screens | 300.00 | |
| 4 | small projector screens | 200.00 | |
| 4 | cameras (120 or 127) | 200.00 | |
| | miscellaneous supplies | 200.00 | |
| | Total | \$ 6,500.00 | LS 2,253.000 |

Demonstration Equipment

| | | | |
|----|--------------------------------|-------------|------------|
| 3 | lopping shears (24 or 26 inch) | \$ 48.00 | |
| 8 | pruning saws (small) | 40.00 | |
| 8 | hand pruning shears (8 inch) | 20.00 | |
| 8 | back pack sprays | 320.00 | |
| 1 | Bostrom farm level | 100.00 | |
| 75 | garden (bow) rakes, 4-H | 131.00 | |
| 75 | garden hoes, 4-H | 150.00 | |
| 75 | spading forks | 225.00 | |
| 2 | cross-cut hand saws (10 point) | 7.50 | |
| 2 | jack planes (11½ inch) | 15.00 | |
| 2 | combination squares | 3.00 | |
| 2 | steel tapes, in steel case | 26.00 | |
| 2 | nail claw hammer | 6.00 | |
| | Total | \$ 1,092.00 | LS 378.000 |

Demonstration Materials

| | | | |
|------|-------------------------------------|----|------------|
| 1000 | pounds treble superphosphate | | LS 15.000 |
| 1000 | pounds sulfate of ammonium | | 15.900 |
| 500 | pounds sulfate of potash | | 9.100 |
| 400 | pounds DDT (50% or 75% wettable) |) | |
| 200 | pounds BHC |) | |
| 8 | gallons, malathion (57% con. emul.) |) | |
| 100 | pounds, dieldrin |) | 250.000 |
| 100 | pounds, sevin |) | |
| 100 | pounds, metallic copper (50%) |) | |
| 100 | pounds, wettable sulfur |) | |
| | garden seed, 4-H | | 10.000 |
| | Total | LS | 300.000 |
| | Sub-total | LS | 2,931.000 |
| | Grand Total | LS | 71,733.000 |

RECURRENT BUDGET, BLUE NILE PROVINCE

Personnel (Salaries)

| | | |
|--|-------|--------------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 District Agent and training officer (DS) | | 645.000 |
| 2 District Agents (Q) | | 700.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 5 Extensionist (JH) | | 1,200.000 |
| 2 Clerks (J) | | 360.000 |
| 4 Messengers | | 240.000 |
| 6 Drivers | | 1,080.000 |
| 16 Local Extensionists (K) | | 1,728.000 |
| | Total | LS 6,948.000 |

Buildings

| | | |
|-------------------------|-------|--------------|
| Amortization (20 years) | LS | 2,650.000 |
| Maintenance | | 2,400.000 |
| | Total | LS 5,050.000 |

Transportation

Operation

| | | |
|-------------------------------------|-------|--------------|
| Fuel | LS | 1,440.000 |
| Maintenance, repair and replacement | | 2,520.000 |
| | Total | LS 3,960.000 |

Demonstration equipment and material, visual aid, office supplies, and 4-H garden seed LS 200.000

Sub-total LS 16,158.000

EXTENSION SERVICE, BAHR EL GHAZAL PROVINCE

Staffing Pattern

| | | |
|-------------------------------------|-------|--------------|
| 1. Wau | | |
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 4 Local Extensionist (K) | | 432.000 |
| 2 Drivers | | 360.000 |
| 1 Messenger | | 60.000 |
| | Total | LS 2,267.000 |
| 2. Rumbek | | |
| 1 District Extension Officer (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 4 Local Extensionist (K) | | 432.000 |
| 1 Driver | | 180.000 |
| 1 Messenger | | 60.000 |
| | Total | LS 1,262.000 |
| 3. Aweil | | |
| Same as R. mbek | LS | 1,262.000 |

| | | |
|----------------|-----------|--------------|
| 4. Yirol | | |
| Same as Rumbek | | LS 1,262.000 |
| | Sub-total | LS 6,053.000 |

Buildings and Houses (Bahr El Ghazal Province)

| | | |
|-------------------------|-----------|---------------|
| 1. Wau | | |
| 1 Office Showroom | | LS 5,045.000 |
| 1 Senior standard house | | 3,900.000 |
| 1 Middle standard house | | 2,540.000 |
| 1 Junior standard house | | 2,015.000 |
| | Total | LS 13,500.000 |
| 2. Rumbek | | |
| 1 Middle standard house | | LS 2,540.000 |
| 1 Jr. standard house | | 2,015.000 |
| | Total | LS 4,555.000 |
| 3. Aweil | | |
| Same as Rumbek | | LS 4,555.000 |
| 4. Yirol | | |
| Same as Rumbek | | LS 4,555.000 |
| | Sub-total | LS 27,165.000 |

Office Equipment, Furniture and Supplies

| | | |
|------------------------------------|-------|------------|
| 1. Wau | | |
| 2 large desks (5 drawer) | | LS 26.000 |
| 2 medium size desks (3 drawer) | | 14.000 |
| 3 desk chairs | | 30.000 |
| 2 typewriter desks | | 8.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| 15 straight chairs | | 30.000 |
| 1 filing cabinet (steel, 4-drawer) | | 18.000 |
| 1 typewriter, Arabic | | 89.000 |
| 1 typewriter, English | | 58.000 |
| 1 duplicating machine | | 71.000 |
| 1 conference table, large | | 12.000 |
| miscellaneous office supplies | | 100.000 |
| | Total | LS 471.000 |
| 2. Rumbek | | |
| 1 large desk (5 drawer) | | LS 13.000 |
| 1 medium desk (3 drawer) | | 7.000 |
| 2 desk chairs | | 20.000 |
| 1 conference table (medium size) | | 8.000 |
| 10 straight chairs | | 20.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| miscellaneous office supplies | | 50.000 |
| | Total | LS 133.000 |
| 3. Aweil | | |
| Same as Rumbek | | LS 133.000 |

| | | |
|----------------|-----------|------------|
| 4. Yirol | | |
| Same as Rumbek | LS | 133.000 |
| | Sub-total | LS 870.000 |

Transportation (Bahr El Ghazal Province)

| | | |
|---|-------|---------------------|
| 1. Wau | | |
| 2 cars (jeep station wagon or equivalent) | LS | 2,492.000 |
| 2. Rumbek | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 3. Aweil | | |
| Same as Rumbek | | 1,246.000 |
| 4. Yirol | | |
| Same as Rumbek | | 1,246.000 |
| | Total | LS <u>6,230.000</u> |

Visual Aid Equipment and Supplies

| | | |
|---------------------------------|--------------------|--------------|
| 4 16mm movie projectors | \$ 4,000.00 | |
| 4 3½ KW generators | 1,200.00 | |
| 4 electric slide and film proj. | 400.00 | |
| 4 large projector screens | 300.00 | |
| 4 small projector screens | 200.00 | |
| 4 cameras (120 or 127) | 200.00 | |
| miscellaneous supplies | 200.00 | |
| | <u>\$ 6,500.00</u> | LS 2,253.000 |

Demonstration Equipment

| | | |
|--|--------------------|------------|
| 8 pruning saws (small) | \$ 40.00 | |
| 8 lopping shears (24 or 26 inch) | 48.00 | |
| 8 hand pruning shears (8 inch) | 20.00 | |
| 8 back pack sprays | 320.00 | |
| 1 Bostrom farm level, tripod, rod, target | 100.00 | |
| 75 garden (bow) rakes, 4-H | 131.50 | |
| 75 garden hoes, 4-H | 150.00 | |
| 75 spading forks, 4-H | 225.00 | |
| 2 cross-cut hand saws (10 point) | 7.50 | |
| 2 jack planes (11½ inch) | 15.00 | |
| 2 combination squares | 3.00 | |
| 2 steel tapes, in steel case | 26.00 | |
| 2 nail claw hammers | 6.00 | |
| | <u>\$ 1,092.00</u> | LS 378.000 |

Demonstration Material

| | | |
|---|----|----------|
| 1000 pounds treble-superphosphate | LS | 15.000 |
| 1000 pounds sulfate of ammonium | | 15.900 |
| 500 pounds sulfate of potash | | 9.100 |
| 400 pounds, DDT (50% or 75% wettable) |) | |
| 200 pounds, BHC |) | |
| 8 gallons, mal. thion (57% conc. emul.) |) | |
| 100 pounds, di.ldr in |) | 250.000, |
| 100 pounds, se in |) | |
| 100 pounds, mer.alic copper (50%) |) | |

Demonstration Material (cont.)

| | | |
|------------------|----|------------|
| garden seed, 4-H | | 10.000 |
| Total | LS | 300.000 |
| Sub-total | LS | 2,931.000 |
| Grand Total | LS | 43,249.000 |

RECURRENT BUDGET, BAHR EL GHAZAL PROVINCE

Personnel (Salaries)

| | | |
|-------------------------------------|----|-----------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 3 District Extension Officer (Q) | | 1,050.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 4 Jr. Extensionist (JH) | | 960.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 5 Drivers | | 900.000 |
| 4 Messengers | | 240.000 |
| 16 Local Extensionists (K) | | 1,728.000 |
| Total | LS | 6,053.000 |

Buildings

| | | |
|--------------|----|-----------|
| Amortization | LS | 1,358.000 |
| Maintenance | | 2,000.000 |
| Total | LS | 3,358.000 |

Transportation

| | | |
|-------------------------------------|----|-----------|
| Operation | | |
| Fuel | LS | 1,200.000 |
| Maintenance, repair and replacement | | 2,100.000 |
| Total | LS | 3,300.000 |

| | | |
|---|----|------------|
| Demonstration equipment and material, visual aid, office supplies and 4-H garden seed | LS | 200.000 |
| Sub-total | LS | 12,911.000 |

EXTENSION SERVICE, KHARTOUM PROVINCE

Staffing Pattern

Khartoum

| | | |
|-------------------------------------|----|-----------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 4 Local Extensionists (K) | | 432.000 |
| 1 Messenger | | 60.000 |
| 3 Drivers | | 540.000 |
| Total | LS | 2,447.000 |

Buildings and HousesKhartoum

| | | |
|---------------------------------|-------|----------------------|
| 1 Office and show room building | LS | 6,500.000 |
| 1 senior standard house | | 5,900.000 |
| 1 middle standard house | | 4,000.000 |
| 1 junior standard house | | 2,500.000 |
| | Total | <u>LS 18,900.000</u> |

Office Equipment, Furniture and SuppliesKhartoum

| | | |
|------------------------------------|-------|-------------------|
| 2 large desks (5 drawer) | LS | 26.000 |
| 2 medium size desks (3 drawer) | | 14.000 |
| 2 typewriter desks | | 8.000 |
| 4 desk chairs | | 40.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| 15 straight chairs | | 30.000 |
| 1 filing cabinet (steel, 4 drawer) | | 18.000 |
| 1 typewriter, Arabic | | 89.000 |
| 1 typewriter, English | | 58.000 |
| 1 duplicating machine | | 71.000 |
| 1 conference table (large) | | 12.000 |
| miscellaneous office supplies | | 100.000 |
| | Total | <u>LS 481.000</u> |

Transportation

| | | |
|---|-------|---------------------|
| 2 cars (jeep station wagon or equivalent) | LS | 2,492.000 |
| 1 cinema van | | 4,845.000 |
| | Total | <u>LS 7,337.000</u> |

Visual Aid Equipment and Supplies

| | | | |
|-----------------------------------|----|---------------|------------|
| 1 electric slide & film projector | \$ | 100.00 | |
| 1 small projector screen | | 50.00 | |
| 1 camera (120 or 127) | | 50.00 | |
| miscellaneous supplies | | 200.00 | |
| | \$ | <u>400.00</u> | LS 131.000 |

Demonstration Equipment

| | | | |
|-----------------------------------|----|---------------|-----------|
| 2 pruning saws (small) | \$ | 10.00 | |
| 2 lopping shears (24 or 26 inch) | | 12.00 | |
| 2 hand pruning shears (8 inch) | | 5.00 | |
| 2 back pack sprays | | 80.00 | |
| 1 farm level, tripod, rod, target | | 100.00 | |
| 30 garden (bow) rakes, 4-H | | 53.00 | |
| 30 garden hoes, 4-H | | 60.00 | |
| 30 spading forks, 4-H | | 90.00 | |
| 2 cross-cut hand saws (10 point) | | 7.50 | |
| 2 jack planes (11½ inch) | | 15.00 | |
| 2 combination squares | | 3.00 | |
| 2 steel tapes, in steel case | | 26.00 | |
| 2 nail claw hammer | | 6.00 | |
| | \$ | <u>467.50</u> | LS 162.00 |

Demonstration Materials

| | | |
|--|----|---------------|
| 200 pounds, treble-superphosphate | LS | 3.110 |
| 200 pounds, sulfate of ammonium | | 3.180 |
| 100 pounds, sulfate of potash | | 1.820 |
| 100 pounds, DDT (50% or 75% wettable) |) | |
| 100 pounds, BHC |) | |
| 2 gallons, malathion (57% conc. emul.) |) | |
| 25 pounds, dieldrin (wettable) |) | 85.000 |
| 25 pounds, sevin |) | |
| 25 pounds, metallic copper (50%) |) | |
| 25 pounds, wettable sulfur |) | |
| Garden seed (4-H) | | <u>10.000</u> |
| Total | LS | 103.110 |
| Sub-total | LS | 396.110 |
| Grand Total | LS | 29,561.000 |

RECURRENT BUDGET - KHARTOUM PROVINCE

Personnel (Salaries)

| | | |
|-------------------------------------|----|----------------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 1 Messenger | | 60.000 |
| 3 Drivers | | 540.000 |
| 4 Local Extensionists (K) | | <u>432.000</u> |
| Total | LS | 2,447.000 |

Buildings

| | | |
|--------------|----|----------------|
| Amortization | LS | 945.000 |
| Maintenance | | <u>800.000</u> |
| Total | LS | 1,745.000 |

Transportation

| | | |
|-------------------------------------|----|------------------|
| Operation | | |
| Fuel | LS | 960.000 |
| Maintenance, Repair and replacement | | <u>1,320.000</u> |
| Total | LS | 2,280.000 |

| | | |
|---|----|----------------|
| Demonstration equipment, materials, visual aid, garden seed (4-H) and office supplies | LS | <u>100.000</u> |
| Sub-total | LS | 6,972.000 |

EXTENSION SERVICE, EQUATORIA PROVINCE

Staffing Pattern

| | | |
|-------------------------------------|-----------|--------------|
| 1. Juba | | |
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 2 Drivers | | 360.000 |
| 1 Messenger | | 60.000 |
| 4 Local Extensionists (K) | | 432.000 |
| | Total | LS 2,267.000 |
| 2. Maridi | | |
| 1 District Extension Officer (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 1 Driver | | 180.000 |
| 1 Messenger | | 60.000 |
| 4 Local Extensionist (K) | | 432.000 |
| | Total | LS 1,262.000 |
| 3. Yei | | |
| Same as Maridi | LS | 1,262.000 |
| 4. Torit | | |
| Same as Maridi | LS | 1,262.000 |
| | Sub-total | LS 6,053.000 |

Buildings and Houses

| | | |
|------------------------------|-----------|---------------|
| 1. Juba | | |
| 1 Office - showroom building | LS | 4,900.000 |
| 1 senior standard house | | 3,000.000 |
| 1 middle standard house | | 1,500.000 |
| 1 junior standard house | | 1,200.000 |
| | Total | LS 10,600.000 |
| 2. Maridi | | |
| 1 middle standard house | LS | 1,500.000 |
| 1 junior standard house | | 1,200.000 |
| | Total | LS 2,700.000 |
| 3. Yei | | |
| Same as Maridi | LS | 2,700.000 |
| 4. Torit | | |
| Same as Maridi | LS | 2,700.000 |
| | Sub-total | LS 18,700.000 |

Office Equipment, Furniture and Supplies

| | | |
|-------------------------------|----|--------|
| 1. Juba | | |
| 2 large desks (5 drawer) | LS | 26.000 |
| 2 medium desks (3 drawer) | | 14.000 |
| 3 desk chairs | | 30.000 |
| 2 typewriter desks | | 8.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |

| | | |
|------------------------------------|-----------|------------|
| 1. Juba (cont.) | | |
| 15 straight chairs | | 30.000 |
| 1 filing cabinet (steel, 4-drawer) | | 18.000 |
| 1 typewriter, Arabic, 18" | | 89.000 |
| 1 typewriter, English, 18" | | 58.000 |
| 1 duplicating machine | | 71.000 |
| 1 conference table, large | | 12.000 |
| miscellaneous office supplies | | 100.000 |
| | Total | LS 471.000 |
| 2. Maridi | | |
| 1 large desk (5 drawer) | LS | 13.000 |
| 1 medium size desk (3 drawer) | | 7.000 |
| 2 desk chairs | | 20.000 |
| 1 conference table (medium size) | | 8.000 |
| 10 straight chairs | | 20.000 |
| 1 storage cabinet (5 shelves) | | 15.000 |
| miscellaneous office supplies | | 50.000 |
| | Total | LS 133.000 |
| 3. Yei | | |
| Same as Maridi | LS | 133.000 |
| 4. Torit | | |
| Same as Maridi | LS | 133.000 |
| | Sub-total | LS 870.000 |

Transportation (Equatoria Province)

| | | |
|---|-------|--------------|
| 1. Juba | | |
| 2 cars (jeep station wagon or equivalent) | LS | 2,492.000 |
| 2. Maridi | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 3. Yei | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 4. Torit | | |
| 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| | Total | LS 6,230.000 |

Visual Aid Equipment and Supplies

| | | | |
|-------------------------------|----|----------|--------------|
| 4 16mm movie projectors | \$ | 4,000.00 | |
| 4 3½ KW generators | | 1,200.00 | |
| 4 electric slide & film proj. | | 400.00 | |
| 4 large projector screens | | 300.00 | |
| 4 small projector screens | | 200.00 | |
| 4 cameras (120 or 127) | | 200.00 | |
| miscellaneous supplies | | 200.00 | |
| | \$ | 6,500.00 | LS 2,253.000 |

Demonstration Equipment (Equatoria Province)

| | | | |
|--|----|----------|------------|
| 8 pruning saws (small) | \$ | 40.00 | |
| 8 lopping shears (24 or 26 inch) | | 48.00 | |
| 8 hand pruning shears (8 inch) | | 20.00 | |
| 8 back pack sprays | | 320.00 | |
| 1 Bostrom 1 m level, tripod, rod, target | | 100.00 | |
| 75 garden (bow) rakes, 4-H | | 131.50 | |
| 75 garden hoes, 4-H | | 150.00 | |
| 75 spading forks, 4-H | | 225.00 | |
| 2 cross-cut hand saws (10 point) | | 7.50 | |
| 2 jack planes (11½ inch) | | 15.00 | |
| 2 combination squares | | 3.00 | |
| 2 steel tapes, in steel case | | 26.00 | |
| 2 nail claw hammers | | 6.00 | |
| | \$ | 1,092.00 | LS 378.000 |

Demonstration Materials

| | | | |
|--|-------------|----|------------|
| 1000 pounds, treble-superphosphate | | | LS 15.000 |
| 1000 pounds, sulfate of ammonium | | | 15.900 |
| 500 pounds, sulfate of potash | | | 9.100 |
| 400 pounds, DDT (50% or 75% wettable) |) | | |
| 200 pounds, BHC |) | | |
| 8 gallons, malathion (57% conc. emul.) |) | | |
| 100 pounds, dieldrin (wettable powder) |) | | 250.000 |
| 100 pounds, sevin |) | | |
| 100 pounds, metallic copper (50%) |) | | |
| 100 pounds, wettable sulfur |) | | |
| Garden seed (4-H) | | | 10.000 |
| | Total | LS | 300.000 |
| | Sub-total | LS | 2,931.000 |
| | Grand Total | LS | 35,162.000 |

RECURRENT BUDGET - EQUATORIA PROVINCE

Personnel (Salaries)

| | | |
|-------------------------------------|-------|--------------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 3 District Extension Officers (Q) | | 1,050.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 4 Jr. Extensionists (JH) | | 960.000 |
| 1 Senior Clerk (J) | | 180.000 |
| 5 Drivers | | 900.000 |
| 4 Messengers | | 240.000 |
| 16 Local Extensionists (K) | | 1,728.000 |
| | Total | LS 6,053.000 |

Buildings

| | | |
|--------------|-------|--------------|
| Amortization | LS | 935.000 |
| Maintenance | | 2,000.000 |
| | Total | LS 2,935.000 |

RECURRENT BUDGET - EQUATORIA PROVINCE (cont.)

Transportation

Operation

| | | |
|---|----|------------------|
| Fuel | LS | 1,200.000 |
| Maintenance, repair and replacement | | <u>2,100.000</u> |
| Total | LS | 3,300.000 |
| Demonstration equipment and material, visual aid, office supplies and 4-H garden seed | LS | <u>200.000</u> |
| Sub-total | LS | 12,487.000 |

EXTENSION SERVICE, UPPER NILE PROVINCE

Staffing Pattern

| | | |
|-------------------------------------|----|------------------|
| 1. Malakal | | |
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 1 Jr. Extensionist (JH) | | 240.000 |
| 4 Local Extensionists (K) | | 432.000 |
| 1 Clerk (J) | | 180.000 |
| 2 Drivers | | 360.000 |
| 1 Messenger | | <u>60.000</u> |
| Total | LS | 2,267.000 |
| 2. Renk | | |
| 1 District Extension Officer (Q) | LS | 350.000 |
| 1 Extensionist (JH) | | 240.000 |
| 1 Driver | | 180.000 |
| 1 Messenger | | 60.000 |
| 4 Local Extensionists | | <u>432.000</u> |
| Total | LS | 1,262.000 |
| 3. Melut | | |
| Same as Renk | LS | 1,262.000 |
| 4. Akoba | | |
| Same as Renk | LS | <u>1,262.000</u> |
| Sub-total | LS | 6,053.000 |

Buildings and Houses

| | | |
|-----------------------------|----|------------------|
| 1. Malakal | | |
| Office building - show room | LS | 5,045.000 |
| 1 Senior standard house | | 3,900.000 |
| 1 Middle standard house | | 2,540.000 |
| 1 Junior standard house | | <u>2,015.000</u> |
| Total | LS | 13,500.000 |
| 2. Renk | | |
| Middle standard house | LS | 2,540.000 |
| Junior standard house | | <u>2,015.000</u> |
| Total | LS | 4,555.000 |

| | | | |
|----|--------------|----|------------------|
| 3. | Melut | | |
| | Same as Renk | LS | 4,555.000 |
| 4. | Akoba | | |
| | Same as Renk | LS | <u>4,555.000</u> |
| | Sub-total | LS | 27,165.000 |

Office Equipment, Furniture and Supplies

| | | | |
|----|------------------------------------|----|----------------|
| 1. | Malakal | | |
| | 2 large desks (5 drawer) | LS | 26.000 |
| | 2 medium size desks (3 drawer) | | 14.000 |
| | 2 typewriter desks | | 8.000 |
| | 3 desk chairs | | 30.000 |
| | 1 storage cabinet (5 shelves) | | 15.000 |
| | 15 straight chairs | | 30.000 |
| | 1 filing cabinet (steel, 4 drawer) | | 18.000 |
| | 1 typewriter, Arabic | | 89.000 |
| | 1 typewriter, English | | 58.000 |
| | 1 duplicating machine | | 71.000 |
| | 1 large conference table | | 12.000 |
| | miscellaneous office supplies | | 100.000 |
| | Total | LS | <u>471.000</u> |
| 2. | Renk | | |
| | 1 large desk (5 drawer) | LS | 13.000 |
| | 1 medium size desk (3 drawer) | | 7.000 |
| | 2 desk chairs | | 20.000 |
| | 1 conference table (medium size) | | 8.000 |
| | 10 straight chairs | | 20.000 |
| | 1 storage cabinet (5 shelves) | | 15.000 |
| | miscellaneous office supplies | | 50.000 |
| | Total | LS | <u>133.000</u> |
| 3. | Melut | | |
| | Same as Renk | LS | 133.000 |
| 4. | Akoba | | |
| | Same as Renk | LS | <u>133.000</u> |
| | Sub-total | LS | 870.000 |

Transportation (Upper Nile Province)

| | | | |
|----|---|----|------------------|
| 1. | Malakal | | |
| | 2 cars (jeep station wagon or equivalent) | LS | 2,492.000 |
| | 1 boat, 18 ft. fiber glass and two 25 horse motors | | 1,073.000 |
| 2. | Renk | | |
| | 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 3. | Melut | | |
| | 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| 4. | Akoba | | |
| | 1 car (jeep station wagon or equivalent) | | 1,246.000 |
| | Total | LS | <u>7,303.000</u> |

Visual Aid Equipment and Supplies (Upper Nile Province)

| | | | |
|---|-----------------------------|--------------------|--------------|
| 4 | 16 mm movie projector | \$ 4,000.00 | |
| 4 | 3½ KW generators | 1,200.00 | |
| 4 | electric slide & film proj. | 400.00 | |
| 4 | large projector screens | 300.00 | |
| 4 | small projector screens | 200.00 | |
| 4 | cameras (120 or 127) | 200.00 | |
| | miscellaneous supplies | 200.00 | |
| | | <u>\$ 6,500.00</u> | LS 2,253.000 |

Demonstration Equipment

| | | | |
|----|--|--------------------|------------|
| 8 | pruning saws (small) | \$ 40.00 | |
| 8 | lopping shears (24 or 26 inch) | 48.00 | |
| 8 | hand pruning shears (8 inch) | 20.00 | |
| 8 | back pack sprays | 320.00 | |
| 1 | Bastrom farm level, tripod, rod, target | 100.00 | |
| 75 | garden (bow) rakes, 4-H | 131.50 | |
| 75 | garden hoes, 4-H | 150.00 | |
| 75 | spading forks, 4-H | 225.00 | |
| 2 | cross-cut hand saws (10 point) | 7.50 | |
| 2 | jack planes (11½ inch) | 15.00 | |
| 2 | combination squares | 3.00 | |
| 2 | steel tapes, in steel case | 26.00 | |
| 2 | nail claw hammers | 6.00 | |
| | | <u>\$ 1,092.00</u> | LS 378.000 |

Demonstration Materials

| | | | |
|------|--------------------------------------|---|---------------|
| 1000 | pounds treble-superphosphate | | LS 15.000 |
| 1000 | pounds sulfate ammonium | | 15.900 |
| 500 | pounds sulfate of potash | | 9.100 |
| 400 | pounds, DDT (50% or 75% wettable) |) | |
| 200 | pounds, BHC |) | |
| 8 | gallons, malathion (57% conc. emul.) |) | |
| 100 | pounds, dieldrin (wettable) |) | 250.000 |
| 100 | pounds, sevin |) | |
| 100 | pounds, metallic copper (50%) |) | |
| 100 | pounds, wettable sulfur |) | |
| | Garden seed, 4-H | | <u>10.000</u> |

Total LS 300.000

Sub-total LS 2,931.000

Grand Total LS 44,322.000

RECURRENT BUDGET - UPPER NILE PROVINCE

Personnel (Salaries)

| | | |
|-------------------------------------|-------|--------------|
| 1 Provincial Extension Officer (DS) | LS | 645.000 |
| 3 District Extension Officers (Q) | | 1,050.000 |
| 1 Provincial 4-H Agent (Q) | | 350.000 |
| 4 Jr. Extensionist (JH) | | 960.000 |
| 1 Senior Clerk (JJ) | | 180.000 |
| 5 Drivers | | 900.000 |
| 4 Messengers | | 240.000 |
| 16 Local Extensionists (K) | | 1,728.000 |
| | Total | LS 6,053.000 |

Buildings

| | | |
|--------------|-------|--------------|
| Amortization | LS | 1,358.000 |
| Maintenance | | 2,000.000 |
| | Total | LS 3,358.000 |

Transportation

| | | |
|-------------------------------------|-------|--------------|
| Operation | | |
| Fuel | LS | 1,600.000 |
| Maintenance, repair and replacement | | 2,200.000 |
| | Total | LS 3,800.000 |

| | | |
|---|-----------|---------------|
| Demonstration Equipment, Material, Visual Aid, Garden Seed (4-H) and Office Supplies | LS | 200.000 |
| | Sub-total | LS 13,391.000 |

STAFF FUNCTIONS

THE FUNCTION OF THE AGRICULTURAL EXTENSION SERVICE IN THE MINISTRY OF AGRICULTURE

The Agricultural Extension Service should be organized as the educational arm of the Ministry of Agriculture. It serves as the connecting link between the research, regulatory and administrative activities of the Ministry and the people on the farms of the country. It should be organized at the national level to assemble and prepare available information from all sources, research and technical, in the Government and elsewhere, and to disseminate such information through an organized service at the provincial and local levels by means of meetings, publications, demonstration, discussions, field days, leader training, press, radio, visual aid media and all other methods of informal education.

The aims and purposes of the Agricultural Extension Service are:

To provide farmers with the latest results of scientific research and improved methods in agriculture and rural life for their economic and social betterment.

To increase farm income and thereby improve the general welfare.

To increase production of farm commodities by application of scientific methods and efficient use of natural resources.

To develop the processes of self help and cooperation through the training of local leadership and organization of village people.

To provide the channel of services and information reaching from the Ministry of Agriculture and its several divisions out to farm people and to relay the problems and needs of farmers back to the Government agencies for research, study and solution.

To serve as a liaison agency between rural people and other agencies of the government which contribute to rural welfare.

The Organization of the Agricultural Extension Service

To carry out its function and to achieve its objectives, the Agricultural Extension Service should have trained

personnel organized at the national, provincial, district and village levels.

At the national level, in addition to the Director's office, which controls the operating policies and principles, there are branches in (1) Field Programs, (2) Administrative Services, (3) Agricultural Information, (4) Training and Reports.

Field Programs Branch coordinates the planning and execution of programs in Agricultural Home Economics and Rural Youth and involves all action programs in reaching farm people through the Extension Service.

The Administrative Services Branch maintains personnel records, budget and supplies liaison between extension and ministry services on these matters. In addition it handles all phases of property, supplies, maintenance, travel, and communications.

The Agricultural Information Branch prepares bulletins, circulars, charts, press releases radio, visual aids, and other teaching means for use by agents in informing farmers of the latest and most improved methods of farming which have been developed by research divisions of the ministry.

The Training and Evaluation Branch plans and directs "pre-service", "in-service", and "on-the-job" training programs for extension workers, makes field studies and studies reports to check effectiveness of training methods and evaluate efforts of workers.

The Provincial Office supplies supervision and technical assistance to district and village agents in planning and executing programs including field demonstrations, meetings, leader training and farmers organizations to help farmers increase production and improve rural conditions.

The following presents the organizational set-up:

Job Descriptions of the Several Branches which comprise the Agricultural Extension Service

National Office

1. The office of the Director consists of the Director of the Agricultural Extension Service, Deputy Director and clerical personnel necessary in conducting the affairs of the office.

a. The Director of the Agricultural Extension Service is the chief administrative officer of the Service and is responsible for all agricultural extension work in the country.

b. He is responsible for setting up the necessary organization for achieving the objectives of the Extension Service.

c. He selects personnel to carry out the program. His selection of personnel governs the success or failure of the program.

d. He sets policies and procedures.

e. He organizes and delegates responsibility for facilitating the services.

f. He interprets laws and regulations affecting Extension and administers the same.

g. He directs the preparation of budgets, handling of finances and the records of expenditure.

h. He maintains good working relationships with all agricultural agencies, both in and out of the Ministry.

i. He maintains good morale and understanding of Extension objectives, philosophy, policies, program, supervision, organization and evaluation through regular staff conferences, training meetings, field trips and recognition of work done.

j. He keeps the general public acquainted with the goals and achievements of the Extension Service.

2. Field Programs Branch

This phase of the Extension Service consists of the coordination and supervision of the program and field activities in Agriculture, Home Economics and Rural Youth. The work will be controlled under the Director by an Executive Committee composed of the Deputy Director as Chairman, the three National Supervisors and Branch Chiefs of Training, Specialists and Extension Information as members. This makes a six member committee plus the Deputy as Chairman, who will vote only in case of ties.

For operational purposes the Chief of this Branch should be the National Agricultural Supervisor.

The three Regional Supervisors will be considered members of this Branch and responsible to the National Agricultural Supervisor as Branch Chief. Regional Supervisors are not members of the Executive Committee, but it is envisioned that they will be called before the committee as consultants when matters dealing with specific field operational regions are being considered by the committee.

a. The National Agricultural Supervisor and Branch Chief

- 1) Cooperates with the Director and Deputy in selecting and training Specialists, Provincial Supervisors, and Agents for administering the Extension program.
- 2) Works with Specialists in developing a coordinated National Extension program based on the needs of farm people.
- 3) Organizes "in-service" and "on-the-job" training for Agents in cooperation with the training officer.
- 4) Studies programs and reports and evaluates the work of field workers.
- 5) Makes regular visits to the provinces for observation of Extension program, plans and achievement and undertakes to improve the Service at all times.
- 6) Checks on budgets and finance needs of each province.
- 7) Maintains good working relations with provincial officials in the interest of Extension.

b. National Home Extension Supervisor

- 1) Represents the Director in coordinating, developing and supervising a National Program of Extension work with rural women.
- 2) Coordinates with the Director and Training Officers in selecting and training personnel for positions of Specialists, Provincial Home Extension Supervisors and as local Agents.
- 3) Trains provincial workers and local Agents in program planning, extension field activities, and effective extension methods.
- 4) Keeps all other Extension workers and the public acquainted with the goals and achievements in Home Extension work.

5) Works with Specialists and National Youth Supervisor in developing and executing programs related to youth activities in the rural homes.

6) Studies plans of work and reports and makes evaluation of efforts of Agents.

c. National Rural Youth Supervisor

1) Represents the Director in developing, coordinating and supervising a national program for the benefit of farm youth.

2) Works with Specialists in preparation of instructions and information on project activities for farm youth.

3) Prepares material necessary for carrying out an organized program of activities for rural youth.

4) Trains and supervises provincial leaders and Agents in the organization and method of conducting a youth program.

5) Keeps the public and Co-Extension workers informed on progress and plans related to rural youth.

6) Studies plans and reports and makes evaluation with the aim of improving the program for youth.

7) Attends training conferences, program planning meetings, and makes field trips for observation and youth work.

3. Subject Matter Specialists Branch (or technical workers)

Constitute the technical subject matter staff.

Each is a recognized and established authority in his or her special subject matter field.

From a subject matter standpoint, is related to his special technical research division.

From the standpoint of operations he is related administratively to Extension Service.

As a national project leader he plans a national program of improvement in his field based on needs of farmers.

He bridges the gap between the research division and field extension workers, and therefore assembles, analyzes and interprets economic facts in terms of desirable farm and home practices.

Prepares literature, charts, demonstration outlines and other material and trains agents to use them effectively in dealing with farm people.

Assists Supervisors and Agents in organization of farmers to promote activities in their respective subject matter fields.

a. National Home Economics Extension Specialist:

- 1) She should be highly specialized in her field of work.
- 2) She should participate in organizing refresher and training courses for provincial Specialists and Home Agents.
- 3) She should be responsible to the National Supervisor in carrying out her education activities.
- 4) She should prepare bulletins, leaflets, charts and other visual aids for the training programs and the provincial programs.
- 5) Supervise and evaluate the work in her special field in the various provinces.
- 6) Prepare a plan of work for the year.

4. Administrative Services Branch

This Branch is charged with the responsibility for all of the non-technical services necessary for operating an effective Extension Service. These services include budgets and finance, personnel records, travel, property control and communications.

a. Budget and Finance

- 1) In cooperation with the Director and his staff determine adequate budget needs. Budget formulation.
- 2) Review and advise on budgets for provincial Extension programs.
- 3) Maintain adequate and up-to-date records of all national expenditures. Account for proper use of funds.

4) Serve as liaison officer between Extension and Ministry of Finance Office.

b. Personnel

1) Cooperate with Director and supervisory staff on recruiting, selecting, training and placing personnel.

2) Maintain proper job descriptions for positions which fit into objectives of Extension.

3) Maintain standards of qualifications for jobs.

4) Cooperate with Training Officer in training personnel to be efficient on the job.

5) Maintain records of placement, salaries, promotions, evaluations, leave and retirement.

6) Serve as liaison between Extension and Ministry Personnel Office.

c. Property and Supplies

1) Procure, provide, distribute and maintain proper and adequate equipment and supplies for the efficient operation of the Extension Service.

2) Maintain proper records and accountability for all equipment and supplies.

d. Travel and Communications

1) Arrange and supply all necessary, approved travel for Extension personnel on field work.

2) Coordinate travel arrangements with Finance for purchase order, per diem and reimbursement.

3) Dispatch, distribute and record all communications through mails, telegrams and central files.

5. Training and Reports Branch

This Branch has the responsibility for training Extension Agents, analyzing reports and making field surveys and studies to evaluate the effectiveness of the training program.

a. Training

- 1) Plans training programs to fit needs of new workers.
- 2) Develops pre-service training for prospective extension workers in cooperation with the Shambat Institute of Agriculture and other training centers.
- 3) Develops continuous "on-the-job" and "in-service" training programs for personnel employed.
- 4) Assembles, prepares and organizes material and training personnel to be used in training.
- 5) Coordinates and adapts training program to the needs of agriculture, home economic and youth workers as determined by supervisors.
- 6) Plans and coordinates regular and systematic training through staff conferences, meetings with technical group and related workers in other specialized fields.

b. Field Studies

- 1) In cooperation with the Director and Executive Committee develop plans and schedules for systematic, valid surveys and field studies to determine the effectiveness of the Extension program, or phases of it.
- 2) Train agents and supervisors to appraise and analyze extension programs and their effectiveness.
- 3) Analyze programs of work and reports of extension workers to evaluate degree of effectiveness and to improve service.

c. Reports

- 1) Develop adequate system of reporting for all Extension workers in cooperation with the Director and Executive Committee.
- 2) Prepare forms for reporting.
- 3) Prepare regular monthly, quarterly and annual summary of reports for the Director, Executive Committee and Information.
- 4) Develop means for training agents in keeping proper information for making reports.

6. Extension Information Branch

This Branch has the responsibility for developing in cooperation with Specialists printed material, leaflets, circulars, bulletins, posters, charts, press and radio programs, maintaining audio visual services, training extension agents in methods of reaching and attracting people, and development of films for disseminating information to farm people through extension agents. The specific services of this branch are:

a. Printing and Publications

1) Work with Specialists in preparation and printing of bulletins, circulars, leaflets, charts and posters for use by extension agents.

2) Supervise art work, editing and printing of all material.

3) Organize, supervise and keep a record of distribution of all printed supplies in accordance with plans approved by the Director and Executive Committee.

4) Maintain complete library of publications of general benefit to extension workers.

b. Audio Visual

1) Assist in training agents and other workers in the use of improved methods of visual aids and mass media in reaching people.

2) Plan and direct the organization for the distribution, control and use of mobile units with complete equipment, operate film distribution library, train operators, maintain records of distribution and use of equipment, number of cinema and attendance for each unit.

3) Prepare script in cooperation with Specialists, and make films, slides and film strips.

c. Press and Radio

1) Establish and maintain regular press releases of value to the general public and of direct benefit to farmers.

2) Establish and maintain a regular program on the radio for the benefit of farmers and general public.

3) Train Extension Agents, Specialists and Supervisors in methods of preparation of material for use in press releases and radio programs.

d. Exhibits

1) Maintain a collection and display of exhibits of products, equipment and posters presenting the best practices and benefits of extension work.

2) Prepare and supply provinces with portable displays presenting objectives of extension and results of extension practices.

3) Train agents in the art of preparation of farm products for exhibit and display.

Provincial Extension Organization

The provincial Extension organization is the strong unit in the Agricultural Extension Service. It is headed by a supervisor and consists of a Home Extension Supervisor, a Rural Youth Supervisor, and an administrative clerk, or assistant.

In addition to the provincial Extension Office, the District Officer and village Agents comprise an important part of the provincial Extension organization.

a. The Provincial Extension Supervisor

1) Represents the Director of Extension in carrying out all policies and administrative duties, selection and employment of Agents.

2) Assists district and village Agents in planning and executing programs of improving farming practices and rural improvement.

3) He is a combination supervisor and teacher. His supervisory function is to help Agents plan projects, programs, and demonstrations, and his teaching function is to assist his Agents in carrying out these plans successfully.

4) Gives guidance to Agents in methods of obtaining the interest and participation of rural people in planning programs and projects of value and interest to them.

5) He is a leader of Agents and not a policeman.

6) Teaches Agents, with assistance of Specialists, to use practical demonstrations, and to follow them to conclusion for greatest effectiveness.

7) Studies reports as well as the work of Agents directly evaluate their effects.

8) Promotes continuous plans for improving the work of Agents through regular conferences, training meetings, field trips and distribution of Specialists time and assistance to Agents.

9) Maintains an efficient office organization at all times.

10) Submits regular reports of his own activities together with summary reports of all workers to the National Supervisors and the Director.

b. Provincial Home Extension Supervisor

1) She should be a coordinator and administrator:

2) She should cooperate with other Extension offices and also various governmental agencies to facilitate the jobs of Home Agents and District Supervisors.

3) She should create harmony in her sphere of work and have a definite provincial policy which should be according to the felt and unfelt needs of that respective province.

4) She should be in contact with the national leader while administratively responsible to the Chief of the province Extension.

5) She should be responsible for fiscal operations of provincial Home Extension.

6) She should compile all district and village reports and submit a summary of them to the national leader.

c. Provincial Rural Youth Supervisor

1) Analyze the village or community situations as to the youth population, agricultural and rural life problems, youth organizations and their programs as a basis for the interpretation of the interests and needs of boys and girls.

2) Develop the interest and cooperation of various organizations and of rural people in development of boys and girls through 4-H club work.

3) Assist people in villages and communities in the organizing of local 4-H clubs, in selection of the local leaders and in development of the club programs.

4) Prepare a program and plan of work based upon needs of local clubs and youth with the assistance of various groups' representatives.

5) Supervise the work of Extension Agent and local leaders and give them recognition and training.

6) Attend club meetings to assist the club, and local leadership with program planning, visit members' homes, and provide literature to help them in carrying out their programs.

7) Help to evaluate work done by obtaining and analyzing records and by preparing statistical and narrative reports for provincial and country use.

8) Assist in the planning for fairs, club shows, and other activities.

9) Represent the Extension Service of the Ministry of Agriculture and the National Supervisor of 4-H clubs.

10) Improve himself as a 4-H worker by attending conferences, reading, studying aspects of 4-H club work and taking courses so as to be familiar with most recent subject matter, methods to increase his ability in planning, supervising and carrying forward an educational program for youth.

d. District Extension Agents

1) Serves as an assistant to the provincial Extension Supervisor in training, supervising and assisting village Extension Agents.

2) Knows the economic problems facing the farmers of his area.

3) Is informed on the function of the Ministry of Agriculture and all policies and services of the Agricultural Extension Service.

4) Keeps in constant touch with the needs and interests of farmers and knows how to use the Extension Service and other resources to help the farmers.

5) Assists village Agents in planning and executing field demonstrations to teach farmers the value of improved methods of farming.

6) Helps Agents to organize and hold meetings of farmers to discuss problems and plans for solving them with leaders and officers of the district and keeps them acquainted with latest developments in agriculture and farm life.

7) Holds meetings of Agents to discuss their problems and improve their techniques.

8) Studies the reports of Agents and undertakes to improve them and to evaluate efforts of Agents.

9) Submits reports of Agents and his own report to the provincial Extension Supervisor.

10) Maintains good relations with governors and mayors and informs them of the work of Agents.

f. District Home Extension Agent

1) She should visit and supervise the activities of Home Agents in her respective district.

2) She should prepare a program of work and carry it out.

3) She should be in contact with Extension offices and other governmental agencies and ask for help whenever the need arises.

4) She should be a coordinator between the Agents of her area as well as between the Agents and Specialists, thus supplying the Agent with needed subject matter materials and assistance.

5) She should represent the provincial leader at the district level and be an administrator within the respective area.

6) She should submit reports of her own and of her Agents to the provincial leader.

g. Extension Agents

It is planned to have Extension Agents in the villages who will work with village and farm people under the guidance of the district agent.

1) He must know his relationships in the Ministry of Agriculture and how to use its resources in improving rural living standards.

2) He must be acquainted with the type of farming in his area and know how to help farmers improve their situation.

3) He must study the farmers, their thinking, their way of doing things and how to influence them in adopting improved methods.

4) He must understand methods of helping farmers to help themselves.

5) He should work through village leaders and use their influence and services in helping to improve village and farm conditions.

6) He should cooperate with and seek the cooperation of all agencies working to improve farming and life in the villages.

7) He should plan and direct field demonstrations as a means of showing farmers and villagers the advantages of improved methods.

8) He should hold meetings and invite farmers to take part in them and learn better ways.

9) He should teach farm and village people practical things to do to improve their way of life, such as improving crop and livestock production, pest and disease control, good cultural methods, use of fertilizer, new and improved seed, food production, marketing, improvements in homes, home toilets and waste disposal and village improvements.

10) He should cooperate in the Home Extension program to enlist the interest of leaders and women in improving food production, preparation, preservation, family nutrition, home improvement and those activities dealing with the food shelter and clothing problems of the family.

11) He should develop plans with the provincial rural youth leader to organize and teach youth some of the principles of better farming and homemaking.

h. Home Extension Agent

- 1) She should be willing and able to live in the village.
- 2) She should feel the needs of village women through teaching and demonstrating better methods on subject matter such as food preparation and preservation, gardening, poultry, home management, child care, clothing, rural handicraft and sanitation, raise their level of living, thus helping village women to make better homes and more competent mothers and wives.
- 3) She should represent the Ministry of Agriculture concerning the improvement of rural family life.
- 4) She should study the farm women and their family situation and then think on how to influence them.
- 5) She should work with the Extension Agents and village leaders.
- 6) She should make monthly reports of her activities to district leader.

ESSENTIAL ELEMENTS OF EXTENSION EDUCATION

The Extension organization suggested for the Sudan in Part 4 of this manual is functional, feasible and reasonable in cost.

There are three basic elements to effective Extension education that have been tested and found valid in 68 countries, namely:

(1) Program Development

An Extension Service must be capable of developing and implementing a dynamic program that moves in accordance with a predetermined plan.

(2) Leadership Development

An Extension Service must be capable of developing intelligent agricultural leadership able to determine the needs of the agricultural community, and willing to give its time and effort to help the Extension Service fulfill those needs.

(3) Career Development

An Extension Service must be capable of developing a career system that will assure a progressively higher standard of service to the agricultural sector of the economy.

Any Extension Service that can successfully develop these three elements will be effective regardless of the geography, culture or language of the country in which it operates.

Program Development

Introduction

Program planning in extension is a conscious effort to use our resources and organizational abilities to achieve the best possible results in helping to improve agriculture and its farmers. The establishment of plans is best done through the use of certain principles and procedures. This paper describes both the principles underlying sound program development and the procedures leading to formulation and writing of detailed local programs.

What is an Extension Program?

In simplest form it is a list of activities.

But it is more than a list; it is a statement of situation, needs, problems, solutions (objectives), priorities, and who is to do what, when, where and how.

An extension program is a direction of movement.

It is a statement of all the predetermined actions or products to be reached through educational means.

The statement includes how the objectives are to be met through setting up teaching situations to change people in attitudes, knowledge, and skills.

Some Characteristics of Extension Program Development

1. Seeks and needs local participation. Planning helps coordinate the efforts of extension personnel and all the human and natural resources of a village.
2. Starts where people are. Their culture, their desires, their willingness to work and sacrifice for their own goals; part of our extension job is to find out ourselves what these goals are and to help the people identify them.
3. Based on needs of the people. This means needs as understood by the people, encouraged to see their needs by the extension worker. We base our extension objectives on people's needs.
4. The extension program should be comprehensive. Every phase of agricultural needs of the village, for men, women, children, all commodity groups, all income and economic groups.

5. Flexible. The program should meet all the needs as understood now, but be modified as necessary in light of new developments.

6. Continuous. Planning never ends. Problems change, people's desires and needs change, new materials and practices come. People can see their needs more clearly after program planning first outlines them. Also, a written plan keeps extension moving during changes in personnel.

7. It requires and develops leadership. Local leaders know causes and effects of local problems, and their solutions.

8. It uses latest research information and stimulates further research. We need and want the most up-to-date and accurate information available for our programs. As extension becomes more aware of these needs of an area, its workers can serve as resource persons for research development.

9. It makes effective use of all resources available. Coordination of the resources is a major function of extension workers. The resources include extension staff (local, administrative, and specialist), human abilities of the area, natural resources of the area, and other government agencies also working in rural phases of development.

10. Programs need public support. Well planned and organized programs are more conducive for support because the public knows what benefits will come. Extension services need public support of their programs.

11. Reduces "emergency" operation. "Emergency" is used in the sense that an unplanned or poorly planned extension work is continually changing direction, and extension workers seem to be moving about without any real purpose in mind. We need to have our fingers on the pulse of a community, continually aware of its changing needs, but unless we set up definite and clear cut avenues of activities, our work will appear to be "wishy-washy" in the eyes of the public.

12. Serves as a basis for evaluation. If our program is made up of clear cut objectives stated in definite ways, we can, through our evaluation procedures, determine how successful we are.

13. Provides a good way to help people help themselves. Extension serves as a catalyst in a community, to show the way and to inspire and stimulate people to find solutions to their needs.

Growth of Extension Stems from Effective Program Development

It is helpful to know the democratic foundations upon which an extension program can be based. Here is a time sequence of events along the road leading to an extension program which answers the needs of the people, as identified by the people. These events may not always be present in this order, but usually they will be.

1. Organization necessary. An extension organization has its own goals and objectives. Extension is set up by law to accomplish its service, and has staffs at various levels, each to accomplish part of the overall obligation of extension. But remember the organization is the means, not the end.

2. Organization has contact persons. The organization deals with the public through its staff system. The employees, who meet with the public and represent the Ministry and the extension service to the local people, we call contact persons.

3. Local supporting authority. The contact person must work at the local level, must get local identification and support. If he can work through some local group already organized, so much the better. It might be a cooperative, or some local group of growers. If no organization exists, the worker will probably find it necessary to work through chiefs or sheikhs, village headman, councils, guilds, or anyone else in authority at the local scene. The extension worker must be careful not to select the kind or type of organization that could be politically misunderstood. In other words, don't get identified with the wrong people or groups.

4. Extension work not obligation of supporting group. Extension and its workers must become known for extension work rather than doing the work of the supporting groups who encouraged extension to get started. This is just as true when the first supporting authority is a chief or village headman, the work must not be that of the chief or headman, but of the extension service and the Ministry.

5. First activities usually determined from outside. The first objectives of the extension program are usually based on the needs of the community as identified by the extension workers. Because these are probably unfelt needs at that time on the part of the people, it is necessary that an educational approach be set up by the extension workers to generate attention and interest.

6. Extension goes to felt needs. The extension organization begins to function in the areas of felt needs, more and more defined by the people in the community. This basing of the program upon the people does more to break down indifference and hostility because needs as seen by the people are being answered by the extension organization. This is a change from basing the program on the directives from above. The important thing is that extension is doing about the same practices that the directives would order them to, with the difference being that extension is now bringing the practices into the community at the community's request. Finally, the process of basing program planning on the people has allowed the extension service to grow to its final height; to the community, the extension service is now "ours," and objectives or practices become "my" or "mine."

Some Fundamental Truths Helpful in
Program Development

1. People do not vary from their customary behavior and habits unless they feel some need which their existing ways do not satisfy. Motivation can be stimulated through a degree of dissatisfaction (not revolution).

2. Changes which do not involve vital matters are generally more readily accepted, at least are more apt to be tried. (When we start programs we usually do simple things first.)

3. But the most important advances usually do involve vital matters, and therefore cannot be the first objectives we tackle.

4. Don't tamper with the existing social structure for the first objectives. So much can be done without addition of such a formidable obstacle to extension operation.

5. Successful extension operation, coming through group activity, will cause a change in the social pattern. The changes have to come from within. Extension can speed up the rate of change, but it cannot be identified as the major cause of change.

6. Keep programs going with several alternative changes rather than the "one and only" practice or change. This helps develop the choice making opportunity for the people, gives the impression of less pressure, requires less "hard sell" techniques, keeps failures to a minimum, and saves face.

7. People will in general know and understand less about a practice or other new activity than they will admit, or that the extension worker thinks they do. Extensioners must be willing to repeat and repeat, and be patient with people as they grope along the uncharted route leading to local program development.

8. The local extension worker in any area must guide his actions between two extremes. First he cannot operate successfully unless he is accepted by the people. He cannot disturb social balances, prestige, and value systems and still be accepted. But he cannot forget why the Ministry has hired him. He must realize as an agent of change that he is charged with the responsibility of introducing technological changes designed to improve the lot of the people he serves.

9. Don't rush your program, or make the people feel they are being pushed. Village people, the same as you and I, need a period to digest what they have seen and heard. We can begin to establish a direction of our movement, and our purposes will become clearer to ourselves; then we can make them clearer to the people.

10. Extension must recognize the attitudes possible about its work and activities. In general there are two:

a. The extension worker's attitude--that change is desirable and the people ought to want it and want to know all about it.

b. The people's attitude--usually indifference. This indifference is usually through lack of knowledge. If leaders are indifferent to extension in a traditional society, the people may actually be hostile. If we as extension workers can encourage the leaders to be receptive, then we can move the people from indifference to receptivity.

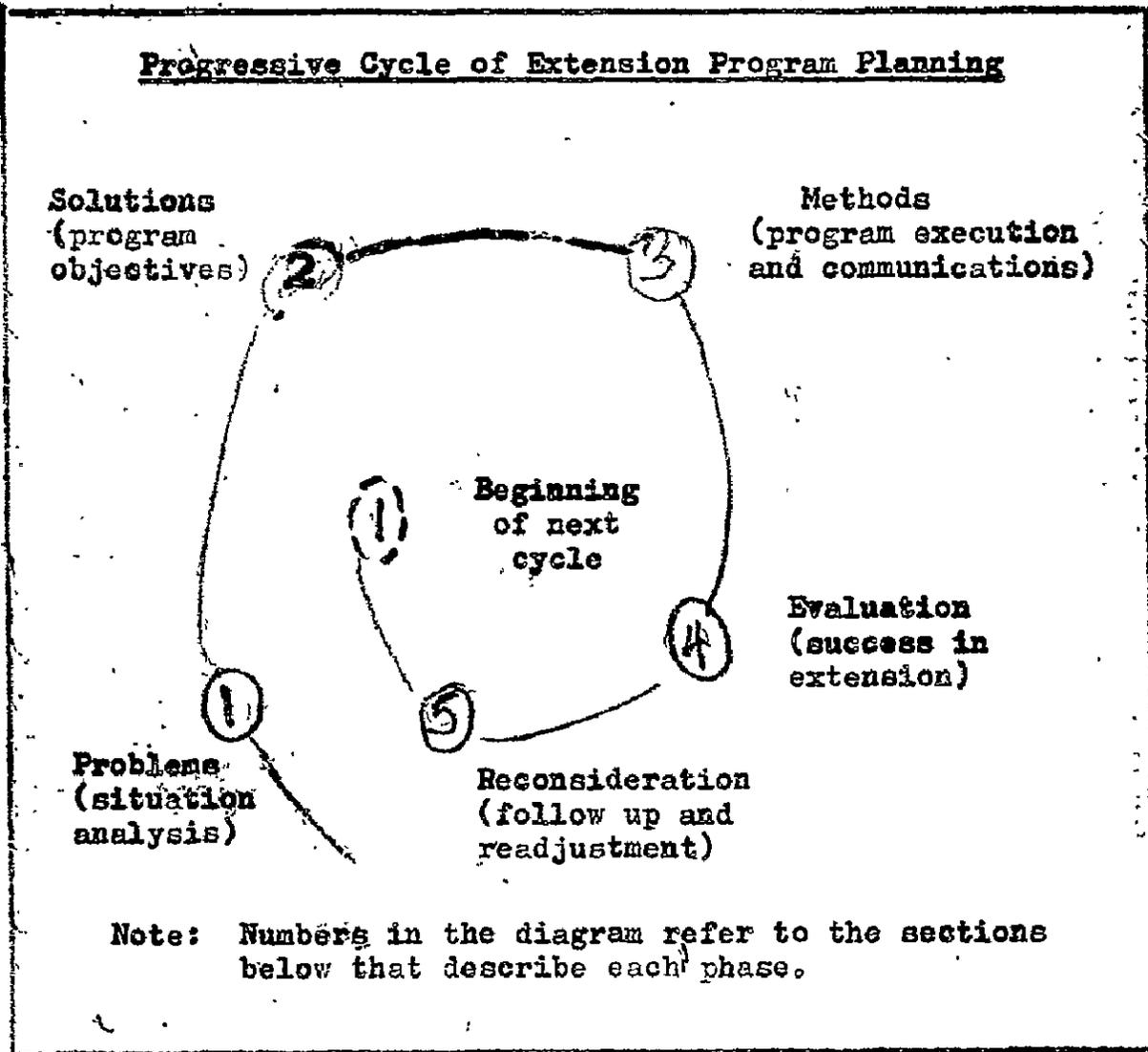
11. The principles of program planning are universal, but programs are not. A program must be specifically adapted to a definite group, and the group's situation, as of right now.

Principles of Program Development

Many of us will be working in areas where the local situation may not have been completely examined and carefully described in writing. One of our first responsibilities as extension workers is to bring together, into an organized body of knowledge, a full description of the local situation. Without this body of knowledge, we will find it difficult to

develop our extension program in a systematic way. With it, we can make sense out of our work and see where we are.

If we think of the program as a cycle or progression of certain stages, program planning will have more meaning to us. Program planning begins where the problems are (this can be called situation analysis), finds solutions to those problems (given as program objectives), moves the solutions into actuality (through the use of extension methods and communications), makes a continuous study of how successful the extension efforts are and have been (evaluation), and then uses the evaluation results as a basis of follow up to readjust the extension program (reconsideration). These five phases of the extension program cycle are shown graphically as follows:



1. Problems (Situation Analysis)

a. Where are the people?

Economic levels
Literacy rates
Attitudes and biases
 Education and self improvement
 Community
 Self in relation to environment
Values -- beliefs -- goals
 For self, family, children, community
Are the people content?
Do the people want improvement?

b. Social Structure

Leadership patterns
Reference groupings

c. Government

Local, village, town, tribal, regional, national

d. Physical Factors

Soil and climatic limitations
Present crops
Marketing information
 Roads, railways
 Transport, communications
 Cooperatives
 Trends and potentials
 Competition
 Local
 National
 International
 Off-farm jobs

e. Knowledge of Situation

Must have enough knowledge to get program started,
 requires a balance of information, some on every
 major segment.
Will never know entire story
Not everyone agrees on where the people are
Knowing the situation requires continual alertness

f. How should situation be changed?

What do people want?

People's interests -- needs -- values

What is practical?

What is regional and national goals?

What does research say?

Felt = Unfelt
Needs = Needs + Education

2. Solutions (Program Objectives)

a. Educational objectives aim to change behavior of people in attitudes, knowledge, and skills.

b. Objectives move us from what is to that which is reasonably possible. This is the "gap" in extension, the difference between what is and what ought to be.

c. Attainable

d. Understandable

e. Socially desirable

f. Meet country and provincial goals

g. Example of a train of objectives--a set of objectives that goes from the broadest level (fundamental) down to the working level (specific):

To improve diet of farm families in X
(province) (district) (town) (village)

To increase knowledge of nutrition

To increase number of farm families using home gardens

To know what to plant, how to plant, when to plant,
how to grow, how to cultivate, and how to harvest

To know how to prepare vegetables for eating

h. Objectives are classified from fundamental, through general, to specific working levels.

i. There are long-range objectives and short-term goals.

j. Priorities help us decide which to do first.

k. Safety in number of objectives; need a balance.

3. Methods (Program Execution and Communications)

Our extension methods move the program from paper to actuality.

Set up teaching situations.

Set up annual plans or calendars of work.

Schedule activities

Division of responsibilities

Select teaching methods

Plan assistance, coordination, and cooperation needed by:

Extension Staff

Lay leaders

Extension specialists

Other services, agencies, or ministries.

4. Evaluation (Success in Extension)

Evaluation is the process of collecting and interpreting evidences of change of attitudes, knowledge, skills, interests, and habits of people.

Evaluation is the systematic study of past experience to improve future performance.

Evaluation is a continuous process.

It should not wait until the end of a period or project.

Types of evaluation: Administrative
Personnel
Program
Methods

Degrees of evaluation

| | |
|------------|----------------------------------|
| | (Casual, everyday |
| | (Self-checking |
| | (Observing |
| Individual | (Questioning |
| Worker | (Discussion |
| | (Aided self-checking |
| | (Training by extension |
| | (specialists and administrators |
| | (Extension studies |
| | (Broader, more complex |
| Service of | (Scientific extension research |
| Ministry | (Long term, cause and effect |
| | (Usually based on statistics |

5. Reconsideration (Follow Up and Readjustment)

At this stage we know more than we did.

We can now profit from our mistakes.

Purpose of reconsideration:

To help align or realign program objectives with people's needs and interests.

To help strengthen program.

Time for deciding:

What new information is needed.

What new emphasis or priorities to establish.

What new directions.

Replan extension research.

Use of Objectives in Extension Program Development

An analysis of the situation in the process of extension programming will bring out the facts and problems which need to be looked into by the extension worker engaged in improving the standard of living of rural people. Objectives help him to do this more efficiently.

What are Objectives?

Kelsey and Hearne define objectives as "expressions of the ends toward which our efforts are directed"; in other words, an objective in extension is a direction of movement or a statement of some predetermined action or product to be reached through educational processes. An analysis of the situation in the extension program process will bring out certain facts and problems which need to be looked into by the extension worker engaged in an action program for improving the standard of living of rural people.

Let us now assume that the extension worker is concerned with the improvement of the standard of groundnuts produced by farmers in X province, with a view to getting a better income from their plantings.

Levels of Objectives

a. Fundamental

To develop the Sudan.

To develop X province.

To develop agriculture.

To help farmers lead a more satisfying rural life.

These are the all inclusive objectives of society, that is, the development of the individual, of communities, of society itself, and of the country. The fundamental objective is to teach people how to determine their own problems, help them acquire knowledge about the problems, and motivate them to the extent that they will want to do something about the problem.

b. General

These objectives are the bases of our long term program aims, to bring new ideas, new techniques, new knowledge, all leading to better crops, better homes, better health, and better citizenship. We try to make people more efficient, improve income, and better the standards of living.

c. Specific

This is where people's needs are brought into focus one at a time.

This is where teaching situations are set up.

This is where extension teaching takes place.

Each specific objective should have three aspects.

1. A particular group of people.
2. A particular subject matter area.
3. A definite change in behavior.

Objectives are to Change People Through Education

We want to change people in attitudes, knowledge, and skills.

Each objective is to change people in only one aspect at a time.

Let us continue our example of improved groundnuts and see what changes in the farmers must come about if the objective is to be achieved. These educational objectives must be considered:

(1) Changes in attitudes and ideals or points of view

To appreciate the need for improved groundnut yields per feddan for upright varieties.

That effort must be exerted to produce higher yields of better quality.

That health of the plants, proper spacing between rows and between plants within the row must be considered.

That groundnuts must be harvested at the right stage of maturity and properly dried.

(2) Changes in knowledge or things known, or amount of useful information

That the quantity and quality of groundnuts harvested can be improved.

Knowledge of plant spacing

Knowledge of harvesting and drying

(3) Changes in skills or ability to perform specific acts or extension practices

Spraying techniques

Harvesting techniques

Drying techniques

Purpose of Objectives

To know what we are aiming at, and to let others know.

To help us select the proper extension method or combination of methods for our teaching situations.

To help us in evaluation, to see what progress we are making.

Characteristics of Objectives

Clearly worded

Attainable

Bring satisfaction to those doing them

Justifiable

Socially desirable

Developmental -- develop people as well as programs

Setting up Priorities

How many people are involved?

How widespread is the need?

Why does need exist?

Relative importance compared to other needs

What would happen if extension were to do nothing about the need? (economically, socially, politically)

Seasonal priorities

Long term vs short term needs

Relative costs of projects

Which will bring the best returns:

To the farmer?

To the extension service?

To the province?

To the country?

Example of a Complete Set of
Extension Objectives.

A. Fundamental Objective.

To improve agriculture and raise the level of living of farmers in X province.

B. General Objective

To improve the yield and quality of groundnuts produced in X province as one means of bettering the livelihood of farmers in the Sudan.

C. Specific or Working Objectives

1. To introduce to the groundnut farmers of X province the Barberton variety of groundnuts.

2. To encourage the groundnut farmers of X province to use the recommended plant spacing to assure the proper plant population per feddan.

3. To encourage the groundnut farmers of X province to grow healthy plants by controlling thrips and leaf hoppers.

4. To encourage the groundnut farmers of X province to harvest groundnuts properly.

Use of a Specific Objective in
Extension Program Planning

The following specific program objective is repeated here; (It appears as No. 3 in list above) it will then be fully described as to what it means for the extension worker both to know and to do, and to base his actions on.

"To encourage the groundnut farmers of X province to grow healthy plants by controlling thrips and leafhoppers."

Based on this specific working objective, certain behavioral changes in the groundnut farmers of X province must result, if the objective is to be achieved. These educational objectives can be classified into the following groups.

1. Changes in attitudes and ideals or points of view

To appreciate the need for growing clean, insect-free groundnut plants.

To be convinced that proper use of chemical sprays will control thrips and leafhoppers without injury to the plants or the groundnuts.

The desire or attitude of wanting to know how to use and apply the chemicals properly.

2. Changes in knowledge or things known, or amount of useful information

That thrips and leafhoppers can be controlled through the use of chemicals.

General knowledge of chemical sprays and how they work.

Specific sprays for thrips and leafhoppers.

Costs, benefits, increase per feddan resulting from use of chemical sprays.

When to apply the sprays and dosages needed to effect control.

How to use spray materials with safety.

3. Changes in skills or ability to perform specific acts or extension practices

How to use spray equipment properly.

How to mix spray materials and water properly.

How to spray groundnuts properly to be sure all parts of the plant are covered with spray solution.

How to handle spray equipment after use to prevent rusting or clogging of the nozzles.

How to use proper precautions when handling chemical sprays to prevent injury to children, other adults, animals, and other crops.

How to recognize the results of spraying to see that it is doing what it is supposed to do.

Setting Up Teaching Situations

Let us consider that an extension program has been prepared and the extension worker, his leaders, and his people know

what the objectives of their program are. It is now the main responsibility and function of the extension worker to arrange and provide teaching situations to make the objectives come alive. These teaching situations must offer the farmer the opportunity and stimulate him to learn about the attitudes, knowledge, and skills necessary to adopt the practice. The extension worker can only provide the teaching situation; the farmer must do the learning. Therefore, the more interest and involvement the worker can bring about, the greater the chances for learning to take place.

At this point it is well to consider the steps in extension teaching and their relationship to choice of appropriate extension methods. The extension worker must be able to analyze his people and determine where they are in the steps of extension teaching, in relation to each practice as to their attitude, amount of knowledge, and skills. Knowing what step they are on helps the worker decide on a method or several methods that will move the people to the next step. This process is repeated until action and satisfaction are reached by the people.

Briefly, the steps and how they might apply to our specific objective here on use of chemical sprays, are as follows:

(1) Attention. Getting the attention of the groundnut farmer may be attained through the use of such mass media as posters or other notices tacked up in conspicuous places in the village, through articles in the newspapers (where appropriate), or through leaflets. These would state briefly that control is possible through use of chemicals and that greater income will result because of greater yield per feddan.

(2) Interest. Interest of the groundnut grower may be stimulated by the same mass media means used for attention, or other mass media means may be used, or through some group contact methods. The chemicals are named and their importance in controlling thrips and leafhoppers. Interest can be increased by the farmer when he realizes that the Ministry makes it available locally.

(3) Desire. The extension worker motivates the farmer to desire further knowledge and information, helping the farmer to relate the practice to himself and to his conditions. This can be done through mass media, but it can probably be done more effectively through group methods such as meetings, lectures, discussions, demonstrations, and excursions.

(4) Conviction. Effective extension teaching requires that we not only get information concerning thrips and leafhoppers control to the farmer, but that we help him convince himself to accept it and use it. One way of helping a person is to show him how the costs of the spray material is repaid many-fold by bringing about an increase in quantity and quality of the groundnuts produced. This can be done by such group methods as meetings and demonstrations, or by such individual contact methods as farm visits by the extension worker. Use of locally obtained data of nearby villages, without names of individual farmers, will be very useful in the convincing step.

(5) Action. People learn by doing. The extension worker provides opportunity for the farmer to practice mixing the chemicals, spraying, what to look for as he sprays, and all necessary spray equipment and materials are available at the time needed. For this step the extension worker will find that individual contacts and group demonstrations are the most effective ways to bring about the necessary action on the part of the farmer.

(6) Satisfaction. This is the motivating factor to further learning on the part of the farmer. Reaching satisfaction from each practice adopted will make it easier for the extension worker to reach the action step on subsequent practices. Possible sources of satisfaction coming from use of chemicals in controlling the insects can come from:

a. Higher income resulting from greater yield and better quality groundnuts.

b. Being considered as a progressive farmer in the community, this brings prestige and popularity to him among his fellow farmers.

c. Knowledge that he is using a modern technique in agriculture which makes him feel up-to-date, efficient, creative, and helps build his self confidence.

We have, up to this point, described the steps involved in preparing an extension program and how to determine fundamental, general and specific objectives.

There is additional documentation essential to complete the program cycle.

1. A calendar of work is made out for each specific objective. The Extension program is made up of the total

number of specific objectives for all appropriate activities such as varietal selection, planting, fertilizing, cultivation, harvesting and marketing, for all major crops and farming pursuits. The calendar is made at the beginning of the year and distributes the work load through the year in accordance with normal seasonal farming operations in the area for which it is written. Calendars of work are written by personnel at all levels--village, district, provincial and national. Copies are submitted to the immediate supervisor and a copy of all calendars should be kept in the files of the Reports Office.

2. Monthly itineraries are itemized, detailed listings of anticipated operations for any given month, and should be made out at the beginning of the month and submitted with the monthly report for the preceeding month. These itineraries contribute to smooth operations by designating the anticipated daily operations of each worker, so joint work may be better coordinated. They also provide an easy check any time during the year to see if the program is going according to plan and is on schedule.

3. Monthly reports should report clearly and concisely just what has been accomplished during any given month. They should always be related to what was planned in the calendar and itinerary of work. Their value diminishes sharply if they are not submitted to immediate supervisors promptly.

4. Annual reports, if properly written and then subjected to analyses and evaluation, provide valuable information upon which to base program projection for subsequent years. These reports should not be filed as an historical chronical. They should be used as reference documents. Only in this way can there be assurance of program continuity and predetermined direction over a period of years.

Space does not allow a more detailed discussion of these documents, but it must be emphasized that careful programming and accurate documentation are essential to an effective Extension Service anywhere.

Leadership Development

Leadership is the keystone upon which extension service is built. It is expressed in the professional leadership extension personnel provide individually to any given agricultural situation, and collectively to the regional and national agricultural economy. Even more important is the vast supply of potential volunteers for rural leadership that extension generates, develops, trains, and applies to an effective family approach for raising the standard of living in the agricultural areas of the Sudan. The extension service is charged with the specific responsibility of raising the agricultural production of the Sudan. If this mandate is to be fulfilled with competence and dispatch, every extension worker in the Sudan must understand leadership, its training, maintenance, and application with the same familiarity a farmer regards his plow. Only in this way can extension make productive use of the most effective tool at its disposal.

Philosophies of Leadership

If effective use is to be made of leadership, it must first be understood, just as a farmer must first understand his plow and how it works before he can prepare his land.

There are two basic philosophies of leadership:

1. Autocratic. Where the leader has unlimited power and authority over the other members of the group. This is exemplified by military leadership where the subordinates have little or no part at all in the process of decision determination, and results of which they must implement.

2. Democratic. It is the only leadership that has proven successful in extension work. The members of the group are fully informed about any given situation and collectively arrive at the decision to be implemented. The leader then directs in such a way as to be sure the judgment of the whole group is effected without alteration or omission.

It should be emphasized in this respect that extension workers are teachers in their respective fields and not supervisors. Their function is to help by supplying all possible pertinent information to any given situation so the group involved can make a sound decision, but the decision remains with the group. In a word, extension workers are teachers and not policemen.

Types of Leadership

1. Professional. A major portion of an extension worker's time is devoted to his professional leadership that he supplies to the effective solution of agricultural problems in his own subject matter field. An indirect, but very important aspect of teaching, is the example of leadership exhibited by the worker that is worthy of imitation by those with whom he works.

It must be emphasized that extension personnel may work for other people and for their extension service, but they have dedicated themselves to their country and have accepted the responsibility of making the part of the Sudan where they work a better place in which to live. When all extension personnel really believe this in their hearts and reflect it in their actions, they are exhibiting true leadership in its finest form.

2. Organizational. This type of volunteer leader can be used anytime and anywhere a group of persons is organized for a specific purpose, such as a project group of farmers, or homemakers, or a young farmers club. Their major function is to supply the leadership necessary to unify the components in such a way that a systematic and orderly program may be accomplished. They should be thoroughly familiar with how to run a meeting, how to organize and operate special programs and activities such as agricultural shows and exhibits, how to supply and use effectively teaching and visual aids that will contribute to the welfare of the whole group and not just any individual project component.

Because the ability to conduct an orderly and effective meeting is such an important attribute of the organization leader, a summary of proper parliamentary procedure might be in order. It is generally accepted that the only difference between an unruly mob and an orderly, productive meeting is parliamentary procedure. The following outline, with slight modification, has been accepted and applied to group action all over the world.

PARLIAMENTARY PROCEDURE

Order of Business

1. CALL TO ORDER. President rises and says, "The meeting will please come to order."

2. ROLL CALL. President says, "Will the secretary please call the roll?"

3. READING OF MINUTES. President says, "The secretary will read the minutes of the last meeting." After the reading he will say, "Are there any additions or corrections? If not, they stand approved as read." If there are corrections, the chair directs them to be made and says, "The minutes stand approved as corrected."

4. READING OF CORRESPONDENCE. President says, "Are there any letters to be read?" Secretary reads them.

5. TREASURER'S STATEMENT. President says, "Will the treasurer please give her (his) statement?"

6. COMMITTEE REPORTS

7. UNFINISHED BUSINESS. Anything left over from any previous meeting.

8. NEW BUSINESS. Any member may bring new business before the meeting or the president may state the business and ask for a motion on it.

9. ANNOUNCEMENT OF PROGRAM FOR NEXT MEETING

10. ADJOURNMENT OF BUSINESS MEETING. Motion must be made, seconded, and carried before the president says, "The meeting is adjourned."

Program. The program is informal. It may be a talk by a guest, talk or demonstration by a group member or by the leader, or it may be a regular work meeting.

Social and Recreational Activities. As planned by a committee appointed previously.

Motions

(1) Members always rise when making a motion.

(2) Always address the chair, saying "Mr. President." The President then says, "Mr. _____". This means the person thus recognized has the privilege of speaking (has the floor) and must not be interrupted.

(3) State your motion as follows: "I move that _____."

(4) A motion must be seconded before it can be voted on. It is not necessary to rise or to address the chairman to second a motion.

(5) After a motion has been seconded, the president must state the motion saying, "The motion has been made and seconded that" "Is there any discussion?" (Sometimes discussion threatens to become unending. Therefore, some member should call, "Question," which means that the president must ask, "Are you ready for the question?" or the president asks it on his own initiative and so brings the matter to a vote.

(6) After the discussion the vote is taken.

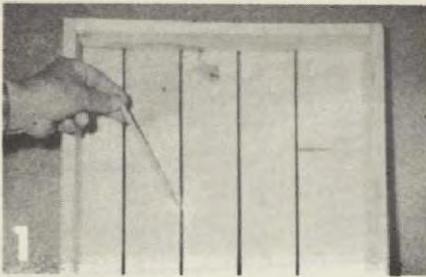
(7) A motion (that is seconded) must either be voted on, or withdrawn, or tabled before another motion can be made.

3. Project. Among extension volunteer leaders the project leader is the teacher. He is responsible for teaching all project material within his subject matter field. Because of this, he becomes the representative of the extension worker in a given village when it is necessary for the worker to be elsewhere. A major responsibility of the project leader is close cooperation with the extension worker in the successful use of result and method demonstrations in any given village. Because the project leader is recognized by his village neighbors as an authority in his subject matter field, he is the logical one to be used as a judge in local exhibits and agricultural shows.

The function of a project leader goes further than the literal teaching of his subject matter to individuals and groups. Extension project work, which is really learning to do by doing, has been effective in bringing about desirable changes in both adults and youth. It can and should help in developing knowledge and desirable attitudes, and improving personal traits and skills. A project leader should be most concerned with how best to help the members of his group select the proper project, who, when, where and how the project will be taught and how to encourage the participants to carry them to a successful completion.

Proper selection of a project can bring adults and youth many satisfactions in their desire for a feeling of accomplishment, in gaining prestige, in challenging their abilities, and in knowing they can excel or do better than others. People will get the most satisfaction if they make a wise selection of the project in which they will work. The project leader can make a major contribution to his village if he will guide his neighbors in choosing a project in which they are genuinely interested, and have the ability, equipment, facilities and resources to carry out successfully.

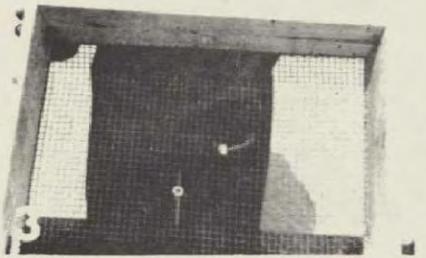
A TYPICAL EXTENSION METHOD DEMONSTRATION



1 SEED FLAT SHOWING CRACKS IN BOTTOM FOR DRAINAGE.



2 SMALL STONES ARE PLACED IN BOTTOM TO AID DRAINAGE.



3 MESH WIRE ON FRAME USED FOR SIFTING SOIL INTO FLAT.



4 NEXT, FLAT IS FILLED TO TOP WITH SIFTED SOIL.



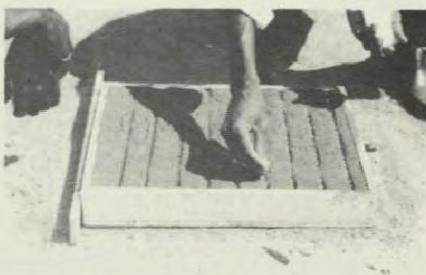
5 SOIL IS LEVELED ACROSS TOP OF FLAT USING A BOARD.



AFTER LEVELING, SOIL IS TIGHTLY PACKED ON EDGES.



SMALL TRENCHES ARE MADE FOR PLANTING OF SEED.



THEN SEED IS EVENLY DISTRIBUTED ALONG TRENCHES.



FLAT IS LEVELED FOR THE LAST TIME BEFORE WATERING.



FLAT IS WATERED USING CAN WITH HOLES PUNCHED IN END.

4. Advisory. No extension program or project component can be successful until it is accepted and desired by the village in which it is attempting to operate. Acceptance, rejection, scope, direction and emphasis can and should be determined by the village. To give expression to those on behalf of any village there are true leaders to whom the villagers individually and collectively go for counsel and guidance. These are not necessarily the political and religious leaders superimposed on the village, but rather the leadership the village itself has generated, accepted and venerated with its respect. They are there and have always been there since any given village became an entity. The bodies may change, but the succession moves with unbroken continuity through the generations. This is the advisory leadership extension seeks to give direction and impetus to its program in the village.

Responsibilities of an Extension leader

(1) To get participation.

(a) Help organize and guide the group. See that there is satisfactory time, place, facilities and equipment for productive group action.

(b) Get the group members to participate in both regular and special meetings and activities.

(c) Secure the active interest and cooperation of a maximum practical number of villagers.

(d) Interpret ideals and activities; add status and prestige to the extension program in the minds of all the villagers.

(2) To reveal opportunities

(a) Sell projects and extension objectives to the members themselves. Show how their individual leadership abilities can be developed by working for and in an extension group, and what it will mean to them as they grow.

(b) Emphasize how extension can develop them as individuals.

(c) Show them the effectiveness of completed project work.

(d) Stress the various opportunities they have to grow intellectually and in experience through participation in extension activities at the village, district, and provincial levels.

(3) To sustain interest

(a) Know and understand the members of the group in terms of their needs and interests.

(b) Keep up-to-date on the latest available information in the subject matter field and make arrangements to pass this information on to members of the group as soon as possible and in language they can understand.

(c) Plan an interesting program of activities. There should be planning with the extension agent so the individual members will realize pleasure for what they do, recognition for what they have, and praise for what they are.

(d) Supply continual guidance to group members in the selection, operation and successful completion of their projects.

(4) To get results

(a) Evaluate the results in terms of what the individuals and the group as a whole set out to do.

(b) The leader should amply demonstrate his own deep interest in what the members of the group are doing.

(c) Obtain cooperation of the other villagers for the successful operation of the project.

(d) Take the members to see other successful projects.

(e) Constantly emphasize the importance of completing whatever task the members undertake.

(f) Results of the group's efforts reflect both the success of the individuals and the success of the leadership.

(5) To give recognition

Be sure to recognize each individual who has made progress even though his work is not the best. Compare his work with how he did at the beginning or with what he did in previous years, not with other members' work.

Leadership Qualities

(1) Personality attributes

(a) Drive and energy. Leadership is demanding and usually requires an energetic person. Sheer output of ideas, plans, and suggestions contribute to good leadership.

(b) Sense of responsibility. A good leader understands that increased power and privileges mean increased responsibility. He should know what is expected of him as a leader.

(c) Enthusiasm. A liberal amount of genuine enthusiasm is needed for good leadership.

(d) Consideration. To succeed with people, the leader must be tolerant, patient and sympathetic toward their shortcomings and confident that in time the individual can overcome them.

(e) Emotional stability. It is important that the leader be conscious of the example he sets. He must be a well-adjusted, well-integrated person with competence to move during good and bad times with poise and serenity.

(f) Friendliness. A good leader must be friendly and possess the capacity for expression. One cannot succeed as a leader without his capacity for friendship and understanding. He must be the type that takes pleasure in helping others and with whom others like to work and assist with the job to be done.

(g) Empathy. The leader should be able to identify himself with and respond to the emotional needs of the members of the group, and be the object of identification for group members. He must be perceptive of the needs of the members. If one can anticipate the needs and behavior of other people he can act to satisfy them.

(h) Good morality. A leader must have high standards of morality. A leader should be liked and respected by the followers and they should have faith that he can help play a major role in their development.

(i) Interest. A leader must have interest, desire and willingness to work with people. He likes and is liked by people. He is a person who because of greater sensitivity has a sympathy and understanding for the problems and needs of people, and to some extent is able to meet those needs.

(j) A pleasing personality. A good leader has a warm feeling towards people and has the ability to win their confidence in him as a person.

(k) A good guide. A good leader learns to make constructive suggestions rather than "lay down the law." He should be able to guide the members to make just decisions regarding the group's activities instead of making decisions for them.

(l) Competence. A leader must be competent enough to move the members toward a group goal. He must therefore know what is expected of him as a leader and how to carry it out successfully.

(m) Ability to produce leadership. Any person selected to be a local leader should recognize the importance of staying in the background while helping group members to assume responsibility. He should study the members, provide situations that will afford them larger responsibilities, and distribute various leadership functions. He should be able to keep ahead of the individuals yet seemingly always with them and making friendly suggestions rather than displaying authority.

(2) An Understanding of People

Individual differences among people must be recognized and their needs met if group members are to develop to their fullest.

Leaders should remember that they are teaching people rather than subjects. It means an awareness that each person in an extension group is an individual whose mind, body and emotions are entirely different from those of his neighbor.

(3) Democratic Attitudes

Extension needs leaders whose attitudes are consistent with democratic ideals.

(a) The democratic leader gains his position of leadership partly because he senses the needs of the group and has the ability to meet those needs. He helps the group members work toward a common objective instead of leading or driving them toward his own goal.

(b) A democratic leader listens to the ideas of others, tries to understand how other people feel and plans with the group. He realizes that the group members are just as important as the leader. He is able to work with people, not just to boss them.

(c) A democratic leader values each person as an individual. He must also believe every person has the inalienable right to be heard.

(d) The democratic leader acts in accordance with the will of the group as expressed in majority decisions. He should be opposed to special privileges for the few and to injustices of all kinds.

A leader may not have all the above leadership qualities, but he can develop them if he will look at himself with searching honesty. He may, through experience and training, add to those qualities he already has.

Leader Selection

Leaders may be chosen in several ways.

(1) The members of the group they are going to lead may either elect or select them.

(2) Other extension groups already established in the village may designate the leader of a new group.

(3) An extension worker, after exploring the fitness and interest of several potential leaders, may select one or more of them.

(4) The leader may volunteer.

(5) Sometimes a representative committee of the village will be appointed to select leaders.

(6) At other times a leader is chosen by a combination of these methods, depending on circumstances.

Regardless of the method used, cognizance should be taken of certain considerations.

(1) Leaders should be selected who have enough time to do an effective job. It should be noted in this respect that most people will find the time to do those things in which they have a genuine interest.

(2) Since financial success is usually the result of ability in a farm enterprise, it is suggested that leaders be chosen who are financially successful in their chosen field.

(3) Leaders should be chosen who have had formal schooling. A major function of the extension leader is the distribution, explanation, and interpretation to the members of his project group of technical written material supplied by the extension service.

(4) Farming is not only an economic enterprise, but a way of life. The effectiveness of an extension leader is greatly enhanced if he has a farm background so he may better understand the actions and reactions of his farmer neighbors.

Leader Training

A major responsibility of the extension service is the training of its volunteer leaders. The quality of this training can easily be measured by the effectiveness with which leaders operate in their chosen fields of endeavor. It is absolutely essential to give potential leaders formal and specific training before they are asked to assume their leadership responsibilities. Some of the more obvious leadership skills that would be appropriate to include in this "pre-service" training are:

- (1) How to organize a group and hold a meeting.
- (2) How to understand people, and especially important in young farmers clubs is how to understand and work with boys and girls of different age groups.
- (3) The importance of village cooperation and what is involved in obtaining it.
- (4) How to designate responsibility and get internal cooperation from an extension group.
- (5) The reasons for and use made of records and reports for which the leader is responsible.
- (6) How to use effectively method and result demonstrations, exhibits, and judging.
- (7) How to train group officers and junior leaders.
- (8) How to evaluate the progress of an extension group.
- (9) How to keep the public informed on the progress and activities of his group.
- (10) How to help an extension group develop its own program.
- (11) How to use the different methods of teaching, extension organizational procedure, subject matter principles and skills.

Leader Maintenance

Leader turnover is expensive to the extension service. It is a needless waste of personnel, time, and energy, and reduces program efficiency. It can be held to a minimum if careful attention is given to:

(1) Keep all leaders supplied with up-to-date material in readable form. It is not enough to mail a leader printed material. Take it to him and use whatever time for explanation that is necessary, until he not only understands it but can explain it to someone else.

(2) Have a carefully planned leader training program. Training must be continuous, planned, and progressive as long as extension is in operation.

(3) Because people learn at different rates of speed, time must be devoted to personalized training in order to maintain a cohesive corps of leaders.

(4) Have leaders take an active part in planning the program they will be asked to help implement.

(5) Recognition is one of the basic needs of people. The extension service should announce leader names through press, radio, and meetings. It should also stimulate expressions of leader appreciation by local groups, arrange for leaders to preside or otherwise have a prominent part in extension meetings, demonstrations, etc., give certificates of achievement or other suitable awards.

There are additional intangible rewards for successful leadership over which the extension service will have only indirect influence. These would include:

(1) The satisfaction that comes from seeing people under your guidance develop skills, attitudes, knowledge and new interests, and grow in confidence, poise, and ability to assume responsibility and leadership.

(2) The pride and satisfaction that come from giving time and energy to serve the village and your neighbors.

(3) The opportunity to develop your own abilities in learning improved practices in agriculture and home economics through leadership training sessions, farm and home visits, tours and others.

(4) The practical knowledge gained from meetings, subject matter instruction, demonstrations by extension workers, bulletins and other materials.

(5) Respect and gratitude of parents of 4-H club members, the village, and the extension service.

(6) Personal growth through leadership experience.

(7) Personal satisfaction of working and playing with neighbors and having helped them to a better way of life.

(8) Helping boys and girls develop into better and more useful citizens.

(9) Opportunity to meet and know many fine people in your province.

(10) Knowing you have helped strengthen village spirit and cooperation.

Leader Evaluation

Evaluation, like training, is a continuous process and forms the basis for successive, and it is hoped progressive, programs. People do not act because they have a leader; they must have the leader to help them act, and the most effective leaders are those that can help the group to help themselves.

The two most critical aspects of any successful local leader program are to secure the right kind of leaders and to train them. If these two cardinal aspects become accomplished fact, they should produce a leader with the following characteristics:

(1) The ability to get along with people.

(2) The ability to guide people with varying needs and changing interests in getting the job done.

(3) The ability to solve problems with individuals and groups.

(4) The ability to sell himself to members of a group and win their confidence, loyalty and trust.

(5) The ability to put across new ideas.

Working toward the above ideal, evaluation then becomes the complete, impartial, analytical answer to two questions in all their ramifications:

(1) Is the leader accepted and respected by those whom he leads, the village in which he operates, and the parents of 4-H club members, both socially and for the technical knowledge he has been able to impart? Please note that what he knows is not important. It is what he has been able to teach successfully.

(2) Have the individuals in the extension group which he has led improved educationally? The universally accepted definition of education is: "The creation of changes in human behavior." It is generally categorized as: changes in things learned are knowledge; changes in things done are skills, and changes in things felt are attitudes. An affirmative answer has to be given to all three components before educational improvement can be acknowledged.

When the two questions above can be answered affirmatively and without equivocation, extension has found, trained and produced a good local leader.

Career Development

No organization, whether private or government can hope to maintain quality control of its output without some assurance that its employees are producing in accordance with their capabilities. This assurance is only possible when the employees are offered incentives for maximum performance as judged by impartial evaluation of their production. This is the heart of a career development system. The high level of morale essential for repeated expression of initiative and sustained high production cannot be dependent upon the whims of the immediate supervisor. It must be dependent upon impartial evaluation of personnel, with incentives for superior performance and training based on the needs of the employees.

Definition of Evaluation

Webster's Dictionary gives the common definition of evaluation "to appraise carefully." This being the simplest and most straightforward definition available, it appears to be the easiest to analyze. First, the phrase implies that some action is necessary. This is not an automatic process. There must be thought orientation, and some material preparation to carry out the process.

Then this orientation and preparation must be carried through a particular type of action as indicated by the word "appraise". Here a process is to be applied to something. What?? Returning to Webster, a part of the definition indicates that to appraise is "to judge or estimate the value, excellence, or status of "qualities or other features". Also included in the definition are the words "to set a value on," implying that this action may also apply to things of a more concrete form. Thus, it can be seen that what may be appraised can be tangible or intangible.

The third word, "carefully", is also important. The implication is that this is not a haphazard sort of operation but one to which some care is given. Careful work is always important. However, if care is defined as depth of penetration then time becomes a factor and it is the compromise on time which partially determines the degree to which care is given. The availability of funds also governs, as we shall see later. Thus it appears that "to evaluate" one must prepare for action, to appraise some tangible or intangible process or thing, in a manner commensurate with the need.

Evaluation is an essential action required of any administrative group to judge the progress of its organization.

In the case of program, the major purpose is to review the present situation in comparison to the situation at the initiation of the enterprise in order that the effectiveness and efficiency of the program development process may be determined. The need has been repeatedly emphasized to consider evaluation as a continuous integral part of program planning, and not an appendage to be added as an afterthought with little or no influence on the outcome.

In any organization, whether it be private or government, and we are certain your Ministry is no exception, total evaluation is divided into the categories of program and personnel. Programs are put into operation by personnel. We would like to offer for your consideration some suggestions for the effective evaluation of the machine that is going to implement the program, known universally as personnel. Each supervisor is responsible for the effective evaluation of the subordinates assigned to his jurisdiction.

Supervisor's Criteria for Judgement

1. Acceptability

One of the most important phases of the overall administrative function is the determination, on a continuous basis, of the acceptability of individual employee performance. But such determination alone is insufficient. Like all other data concerning the organization, the information obtained must be fully utilized if a high level of efficiency is to be maintained. This is an unavoidable responsibility of every supervisor. There are many good reasons why evaluation has to be done right for the good of the organization. We need to determine how well each employee is doing his work for the same reasons that we need to know how well a piece of equipment is doing the job for which it was purchased. As every employee is being paid a wage to do a specific job, we have to check to see if the return justifies the cost. That reason alone would be sufficient to justify doing the job and doing it well.

But there are other good reasons, too. Unless the employee knows how well he is performing, he will entertain some doubt, some uncertainty, and that inevitably exerts a negative influence upon his performance. We cannot expect an individual to overcome a deficiency unless he is aware of that deficiency and is helped by his supervisor to overcome it. The talents of the individual cannot be developed to their fullest unless their presence is known to those responsible for staff development. There are some supervisors who contend that people do not need to be told how they are doing, that if they are not told, they

will assume they are doing all right. Such a view is not correct. Because of individual temperament, some people believe that just about everything they do is done as well as it could be done. They do not recognize substandard performance on their own part when it occurs. There is also the other extreme, the modest and cautious individual who will always think he is performing below standard unless he is given the facts. But the revelation to the individual of what is substandard represents only a part of the job. The individual must also be told what he is doing in an acceptable way and what he is doing in a superior way. One of the ways to bring about improvement in efficiency is to further develop the positive attributes of the employee that are already present. An individual's productivity is influenced by a mental attitude and moods, which are influenced by assurances, certainties, and uncertainties. Favorable reaction to an evaluation results in more competent performance by the employee. People will do better work when they are complimented for their best work.

2. Performance

The objective of any efficient supervisor is to get optimum performance from subordinates. It follows that supervisors themselves are efficient only when they stimulate and assist their staff to achieve this optimum production. Performance evaluation, if carried out properly will always bring to light cases of outstanding work accomplished. Every employee wants the recognition he deserves. The supervisor should identify superior achievement for the simple reason that anything which improves the over-all performance of the employee benefits the organization. Every supervisor should recognize that no employee can be certain that praise or other recognition will be given properly and impartially unless operations are scrutinized systematically, reported on adequately and completely, and the knowledge thus obtained is utilized appropriately. Recognition of employee accomplishments promotes a desire on his part to maintain the record he has established and possibly to improve it still further. Also he feels more confident that he will receive the consideration he deserves when better opportunities (job promotion) become available. The fact that his supervisor put forth the effort to discover his outstanding work and acquaint him with this discovery gives him more confidence in and a greater respect for the organization for which he is working. This is often referred to as job satisfaction. When it is possessed by an employee he invariably tends to put forth his maximum effort.

The development of the proper relationship between the supervisor and each one of his subordinates, and the maintenance

of that relationship once it is developed represents a cardinal prerequisite of sound supervision. This proper relationship is not automatic, and there is no reason to assume that it will be present just because the two people concerned may possibly be good friends away from the job. In fact, if this is the case, it is all the more necessary to develop the needed professional understanding right at the very start for it is always possible, and quite often probable, that a wide area of professional disagreement may later develop.

When deficiencies are discovered, the first step is to determine the cause. To permit the continuation of substandard work with no real effort made to effect remedy is obviously unfair to the employee and the organization. The major concern of both the supervisor and the subordinate is to identify the causes of the substandard work. The subordinate should be given the opportunity to suggest or identify these. Then appropriate remedial action should be taken to prevent any recurrence thereof. The supervisor of course must prevent any similar unsatisfactory occurrence elsewhere in the operational area for which he is responsible. The subordinate should be given full opportunity to take the lead in making suggestions for remedial action. In this way he is making a maximum contribution to the solution of the problem that not only affects his personal career, but the efficient operation of the organization for which he is working. For after all, unless the cause of the trouble rests at superior levels, it is the subordinate, and not the supervisor, who has to effect some kind of a change. If the subordinate has taken an active part in determining the need for, as well as the course of corrective action, he will more willingly accept the decisions and more effectively carry them out.

3. Assignment Performance

The efficiency with which an employee performs the individual phases of his assignment indicates very accurately his interests, and present capabilities. No management can fully utilize the human resources available to it in the absence of the complete knowledge of those resources. That knowledge is never complete unless it includes both the potential of the individual employee as well as his present capabilities. The performance of most employees can be increased. It is the job of supervision to use fully the human resources at its command and to develop those resources to optimum limits.

Low quality performance is not always the fault of the employee who is performing below standard. The trouble may be

caused by any one of a number of organizational deficiencies. The chain of command may not be clearly understood. Or it may be understood but not followed by officers at the superior levels. Work standards may be vague or incomplete, not understood, too high or too low. Work operations may be poorly planned at superior levels. Communications may be faulty and the policies may be so restrictive that it is impossible to coordinate the related activities within the same sphere of operations. The employee may be assigned to a job for which he is not fully qualified or for which he has little or no interest. Work loads may be poorly distributed. Any of the above conditions and others may be uncovered during the course of a performance evaluation on any individual within your organization.

NO INDIVIDUAL CAN PROPERLY BE HELD ACCOUNTABLE FOR ANYTHING HE DOES NOT HAVE THE AUTHORITY TO CONTROL. APPROPRIATE CORRECTIVE ACTION CAN BE TAKEN ONLY BY THOSE WHO HAVE THE RESPONSIBILITY AND NECESSARY AUTHORITY TO INSTITUTE REMEDIAL MEASURES.

As a supervisor undertakes an individual performance evaluation he must keep in mind that work and not people is being evaluated. There is always the natural tendency for the person doing the rating to place too much emphasis on the character of the individual rather than the work he has done. The establishment of clearcut standards and the knowledge of these standards by the employee who is to perform the work is indispensable to the evaluation process. Accurate evaluation of the performance of any given employee may then be reached by comparing the work performed with the prior standards established for that work. Naturally the standards that are prescribed should represent the results that are considered acceptable under normal and average conditions. It then becomes the judgement of the evaluator to determine the acceptability of performance by comparison with appropriate standards under the conditions that existed at the time the work was performed.

Performance standards are necessary at every level and for every job. Application of this is essential from the lowest job to the highest in any organization with no exceptions. Sound management principles preclude the exemption of supervisors, executives and administrators from meeting the criteria of evaluation and performing in accordance with predetermined acceptable standards for their respective positions. It is a fallacious viewpoint that the performance evaluation of individuals in high level positions is any less important than rating those occupying less responsible positions. Actually the relative need for effective performance at the higher levels is greater since these people represent larger investments by

the organization. It is a simple fact that the higher the level of position the more influence it exerts on broader sectors of the entire organization.

As mentioned above, the proper evaluation of subordinate performance is a never ending process. When and how this evaluation should be recorded are different aspects of the same function. In the course of daily routine with subordinates the superior is constantly evaluating performance. When this operation is carried out effectively the proper relationship between the supervisor and his people will be developed. As a result, the subordinate should never have to wonder how, in the opinion of his immediate supervisor, he is getting along.

For the superior and his subordinate to discuss the items mentioned above and stop there is not enough. Possibly they have covered everything thoroughly, and there is no question in the mind of either concerning the conclusions that have been reached. But the elapse of time tends to distort, and there is always a good chance that after a long period of time certain of the items that were covered or the decisions that were reached may be forgotten. It is desirable, many times, for others who were not present during the discussions to be able to check back and find out what took place. For these reasons, and others as well, it is important that such performance ratings be in written form, and be made a matter of record. It is imperative that such a document reflect the acceptance of its content by both the supervisor and the subordinate. It should be concise, clear and complete. It should represent a complete evaluation with respect to the manner in which the employee carried out the requirements of his job during the rating period. There should be included positive reference to the areas in which the individual's performance has been average or above. Specific accomplishments that are considered to be outstanding in character should be cited and should be sufficiently elaborated upon to insure that the individual receives justified credit and recognition. In like manner, areas of deficiency need to be clearly indicated, and plans that were mutually agreed upon with the supervisor for effecting improvement in each of these cases need to be covered fully.

It is essential that any rating document contain an evaluation of the employee's performance for each of the pre-determined principal tasks for which he has been responsible during the rating period. This list of tasks should be agreed upon by both the employee and the rating officer and revised if necessary to reflect the tasks which are sufficiently important to warrant separate rating.

Be sure to differentiate between administrative duties and technical duties. Where administrative duties are involved, indicate the size and character of the staff with which the employee is working. Distinctions between staff and line responsibility should also be brought out. Any major duty changes or duties which are different from those usually found in similar positions are to be identified.

Principal tasks are those continuing and important responsibilities, generally the most complex and difficult, which represent the major purposes or functions of the position. A principal task is not always one in which an employee spends a major portion of his work time, but normally the majority of work time is spent on the accumulated major duties and responsibilities. Tasks should be described concisely. However, their description should not be so brief that the scope, complexity and the level of responsibility of the position are not evident.

Special consideration should be given in rating the performance of an employee whose personal rank is above or below the rank of the position to which he is assigned. The rating is, of course, based on duties and responsibilities assigned the employee. However, if his personal rank is above the rank of the position, consider whether the employee has found ways of expanding his responsibilities so that the job is reflecting his own level of competence. If his personal rank is below that of the position, indicate whether allowances in rating had to be made, or whether, despite his rank, the employee shows capacity to carry out all requirements of the job, and no allowances was necessary.

It is essential in a competent employee performance rating to differentiate between the personal qualities of the employee being rated, and his professional qualities. In the following list of personal qualities I hope you will recognize some of the leadership qualities we have discussed in the previous section on leadership development.

Qualities for Judging Personnel

1. Personal Qualities

a. Industry. Diligence in carrying out assignments; persistence in attending to business.

b. Dependability. Reliability and trustworthiness in doing what is expected at the proper time without direct supervision.

c. Judgement. Capacity to evaluate the relative importance of possible lines of action within limits of field of specialization; ability to foresee consequence of action taken.

d. Initiative and Resourcefulness. Capacity to attempt untried and difficult tasks; alertness in developing apt solutions with a minimum of guidance.

e. Forcefulness and decisiveness. Ability to meet resistance or inertia squarely; the ability to reach sound conclusions promptly.

f. Adaptability. Scope and range of aptitude as demonstrated on the job; ease in mastering new responsibilities; capacity for anticipating need for shift of emphasis; sense of changing circumstances and promptness in conforming with new professional and social patterns.

g. Cooperativeness. Attitude toward the assignment, supervisors, subordinates, the public and toward the program; sense of organizational loyalty; ability to adjust to administrative discipline, willingness to work with and for others.

h. Tactfulness and Patience. Sense of discretion and fitness in personal relations; ability to advise, direct and correct employees and associates without giving offense; calmness; self composure under strain; sense of timing; ability to accept tedious, unrewarding tasks with equanimity.

i. Conduct and Good Manners. Evidence of inherent courtesy, even temper, amiability, refinement. The employee's manner of conducting himself both at and away from the office (including his use of alcoholic beverages) and whether his morals and conduct reflect credit on the Ministry.

j. Ability to get along with Ministry associates. Official and social relationships at all levels of association, with colleagues, superiors, subordinates and other Sudanese.

Now that we have discussed the personal qualities that contribute to the performance level of any given employee, let us consider the professional qualities with which the employee applies his energy to the position to which he is assigned.

2. Professional Qualities

a. Technical Competence. Consider the adequacy of the employee's specialized skills, whether they be professional,

technical, clerical, manual or any other, but be sure to consider only those skills required in the efficient discharging of his assigned responsibilities.

b. Application of technical competence. Consider here the ability of the employee to adapt his total technical knowledge to the position for which he is responsible. Consider his ability to impart in an effective manner his technical knowledge to his subordinates and to stimulate their interest and develop their ability to apply it in order to attain eventually independent technical competence on their own behalf.

c. Knowledge of Ministry administrative practices and effectiveness in applying Ministry regulations. To the extent required or desirable in the employee's assignment, consider his familiarity with and demonstrated ability in the application of laws, regulations and procedures related to personnel, communications, budget, fiscal matters, specialized subject matter in his field of assignment, organization and management, and other matters dealing with the overall organization and operation of the Ministry.

d. Insight into objectives of own program. This includes understanding of the nature and objectives of the immediate program of the organizational unit in which the employee is located and how his own job fits into that program and complements or supports other programs of the Ministry.

e. Knowledge and understanding of over-all program. Familiarity with the scope and purpose of the Ministry's over-all program and its component parts. Understanding the agricultural needs which the Ministry program is trying to meet.

f. Productivity. Consider the extent to which the employee regularly keeps abreast of his work projects and assignments so that he meets the standard of volume of work required in his position.

g. Thoroughness and accuracy of work. Consider the necessity for verification of completed work; the degree of exactness, precision, conformity, to standards or facts; degree of acceptability of completed work as final without any need for corrective alteration by superiors.

h. Power and accuracy of observation. Consider here the shrewdness of perception and the ability to distinguish the significant from the insignificant in any situation.

i. Effectiveness of written expression. Consider the ability to present logically developed concise grammatical

reports, instructions, communications and all the material which must be prepared and presented by the employee in the course of his work.

j. Effectiveness of oral expression. Consider intelligibility, distinctness, forcefulness of speech and choice of words.

k. Negotiating ability. Consider tact, persistency and persuasiveness in reaching agreement with others. Scope of technical and professional knowledge in negotiable matters. Articulateness and poise in conference environments. Faculty for effective compromise without sacrifice of ultimate aims.

l. Effectiveness as a supervisor. If the employee is a supervisor, consider his ability to secure the maximum cooperation and effectiveness from subordinates and stimulate their growth and development while maintaining good morale. Ability to plan, organize and direct the program or work project and to provide effective leadership to meet stated objectives and deadlines.

m. Effectiveness as a rating officer. If the employee is responsible for the rating of other subordinate employees, consider his assiduous approach to, and sympathetic understanding of, the rating process and its significance to individuals and to the Ministry. Also consider the care with which efficiency reports are prepared from the standpoint of adherence to pre-determined definitions of rating levels and individual qualities and factors in assigning those ratings. Consider his absence of bias, either favorable or unfavorable, and the promptness with which he prepares his reports.

Benefits to the Organization

Certain undeniable benefits accrue to any organization as a result of the conscientious application of an unbiased performance rating system:

(1) The identification of training needed by individual employees represents one of the most important results of an effective performance evaluation system. The determination of such training needs is much more complete and accurate because the two people who are best qualified and most concerned are the ones who have made the determination.

(2) An effective job of performance evaluation identifies those individual employees who are misassigned, but it goes much further than mere identification. The reasons behind the

misassignment are brought out into the open and are given timely and thorough consideration in mutual efforts to effect whatever adjustments are necessary and desirable.

(3) When the quality of performance of an employee is properly determined and when such determination reveals serious deficiencies, a positive and forthright course of action is mandatory under a sound management system. Investigation of the situation may reveal it to be so flagrant that immediate separation action is appropriate. Usually, however, an efficient management force will decide if it is logical to attempt to remedy the revealed deficiencies. An orderly course of action will then be determined to bring about a satisfactory result.

(4) As we all know, in an organization that is well managed it is standard practice to fill a substantial portion of vacancies as they occur by promotion of employees already working in the organization. This is the heart of any career system. The first major step in the application of a career system is the identification of those currently employed individuals who are qualified to handle the more responsible assignments.

(5) There is one more valuable use for the results that are obtained from a competent performance rating system. This is the identification of those individuals who are entitled to higher pay in their present positions. There is a difference in the qualifications necessary for more pay in the present position and those that are required for more responsible assignments. There are some systems that provide for seniority pay increases which usually include the payment of fixed amounts at uniform levels so long as the performance of the individual is not unsatisfactory. It is a better management practice if more emphasis is placed on the quality of performance in fixing the current rate of pay for any position. It is recognized that in a large organization such as a Ministry it is entirely possible this latter suggestion may cause fiscal complications. However, under such an arrangement there would be present a very tangible incentive and one that should exert considerable influence on the efficiency of the individual worker.

Conclusion

There are many performance rating systems in operation throughout the world today but any system standing alone means little. It should be clearly kept in mind that any system at best can do nothing more than serve to assist those who are responsible for applying it and for implementing the provisions

stated in it. The very best systems will be of little value if they are not properly applied and utilized. Each supervisor must understand and accept the fact that performance evaluation is an integral part of sound administration and an integral part of his own job as a supervisor. Like all other parts, its value and its contribution to the whole depends on how effectively the function is carried out and not on how closely there is adherence to some requirement imposed from above.

In conclusion, we would like to commend to you a further thought: personnel turnover is costly. It is costly in terms of time, money, energy and manpower, all of which are basic resources that any country can ill afford to squander. The only acceptable alternative is a career development system based on incentives acceptable to the culture in which it is operating; with the assurance that all employees are judged by the same standards devoid of any outside influences and regardless of rank.

PROJECTED U.S. A.I.D. ASSISTANCE
(DRAFT WORK PLAN)
Project 650-11-110-065

I. Activity Objective

The objective of this continuing activity is the phased development of an Extension Service ultimately capable of reaching the estimated 1,897,500 farm families in the Sudan with improved agricultural methods and practices.

The present economy of Sudan depends almost exclusively on agriculture for the generation of its G.N.P. At least 90 per cent of its 12.65 million inhabitants derive their livelihood from agriculture or the estimated 22 million head of livestock. For any given year close to 95 per cent of all the Sudanese foreign exchange earnings come from agricultural commodities--mainly cotton, cottonseed, gum arabic, peanuts, sesame, and livestock. Any favorable balance of trade is generated by agriculture. Revenue for operation of the Government is derived almost entirely from agriculture.

One goal of the present Ten Year Development Plan is the planned progressive development of agriculture. It does not anticipate enough transition to industry to affect the economy greatly.

This activity is the educational component of USAID assistance to the agricultural sector of the economy to meet its commitments on schedule as set forth in the Plan.

II. Course of Action

A. The position of Chief of the Extension Service is to be changed to Director of Extension and elevated to the equivalent of Assistant Director of the Department of Agriculture. A qualified incumbent is to be appointed, with no other responsibilities, and designated as full-time counterpart to the USAID Extension Branch Chief.

B. To make maximum impact on the major agricultural production area of the Sudan, joint USAID/GOS extension activities will be concentrated in Kassala, Kordofan, Blue Nile, Equatoria, Bahr El Ghazal, Northern and Khartoum provinces.

C. A National Extension Seminar will be held in April 1964. Administrative officials of the GOS Department of Agriculture with the assistance of USAID will attempt to implement approved recommendations of the Seminar expeditiously.

D. The Ministry will appoint a qualified National 4-E Supervisor (Branch Chief) to be a full-time counterpart, with no other responsibilities, to the National Rural Youth Advisor (USAID) arriving in the spring of 1964.

E. The Ministry will appoint a qualified national supervisor of specialists (Branch Chief), with no other responsibilities, to be a full-time counterpart to the USAID Extension Agronomist arriving in the spring of 1964.

F. The Ministry of Animal Resources will appoint a Chief, Livestock - Poultry Specialist as national administrator to supervise all livestock and poultry extension specialists in close collaboration with the Chief of Agricultural Extension Service, Department of Agriculture. In this capacity he will undertake these functions: (1) develop a national program of work based upon livestock and poultry requirements of the provinces, (2) prepare and suggest programs and calendars of work to be followed in teaching rural people recommended practices for poultry and related activities, (3) designate areas where poultry distribution and training centers can be developed, (4) prepare budget estimates for personal services, supplies, buildings, and other costs, and submit same to supervisors and provincial authorities for approval, (5) coordinate the poultry specialists' activities with the agriculture staff so as to avoid duplication of efforts and misunderstanding, (6) participate in all proceedings involving national extension policies and activities, (7) develop criteria for personnel selection and provide in-service training to assure professional growth, (8) make outlines for submitting monthly reports on all phases of livestock extension activities, and (9) prepare folders, workbooks, and record books, based upon research findings and make these available for adult and youth poultry producers.

Provincial Poultry-Livestock Specialists will be appointed as required. All provincial livestock - poultry extension specialists will operate under the provincial veterinary officer, and will execute programs of work within the context of the extension service program.

G. The physical facilities of the Information Production Center at Khartoum North are to be completed, and a schedule for the production of Extension teaching materials established and activated.

H. The Ministry will in fiscal 1965 establish the position and appoint a qualified full-time Extension Service Training and Reports Officer with no other responsibilities.

I. USAID will provide a Land Grant College Dean on a full-time or consultant basis to review and upgrade course curricula at Shambat Institute of Agriculture, including home economics for Extension home agent recruits. The Dean will also establish credit course standards and course content for a major in Extension at Khartoum University as soon as the University agrees in writing to incorporate such courses in the undergraduate school.

J. Provincial in-service training needs are to be determined and supplied by the individual Provincial Extension Officers with their respective USAID advisors working cooperatively with the National Extension Training Officer.

K. The following specific training activities are scheduled for FY 64: (1) Shambat 4-H leader training conference, (2) Sennar leader training seminar, (3) National Extension Seminar, and (4) training of provincial field force (151) in Extension methods at Khashm el Girba.

III. Resources Required

A. U.S. Technicians

| <u>FY</u> | <u>Pos. No.</u> | <u>Title</u> | <u>Months Required</u> | | |
|-----------|-----------------|-------------------------------------|------------------------|-------------|-------------|
| 64 | 184 | Chief Extn. Adv. (Broadnax) R-3 | 12 | | |
| | 198 | Extn. Adv. Area (Barham) R-4 | 12 | | |
| | 199 | Extn. Adv. Area (Williams) R-4 | 10 | | |
| | 042 | Extn. Adv. Area (Flaa) R-5 | 12 | | |
| | 185 | Extn. Adv. Info. (Youngsteadt) R-4 | 12 | | |
| | New | Extn. Adv. Agronomist (Vacant) R-3 | 6 | | |
| | New | Extn. Adv. Rural Youth (Vacant) R-4 | 6 | | |
| | TDY | 3 Extension Consultants | 1 | | |
| 65 | 184 | Chief Extn. Adv. (Broadnax) R-3 | 12 | | |
| | 198 | Extn. Adv. Area (Barham) R-4 | 10 | | |
| | 199 | Extn. Adv. Area (Williams) R-4 | 12 | | |
| | 042 | Extn. Adv. Area (Flaa) R-4 | 12 | | |
| | 185 | Extn. Adv. Info. (Youngsteadt) R-4 | 6 | | |
| | New | Extn. Adv. Agronomist (Vacant) R-3 | 12 | | |
| | New | Extn. Adv. Rural Youth (Vacant) R-4 | 12 | | |
| | | | | | |
| | | | <u>1966</u> | <u>1967</u> | <u>1968</u> |
| | 184 | Chief Extn. R-3 | 12 mos. | 12 mos. | 12 mos. |
| | 199 | Extn. Adv. R-4 | 12 " | 12 " | 12 " |
| | 042 | Extn. Adv. R-4 | 12 " | 12 " | 12 " |
| | New | Agronomist R-3 | 12 " | 12 " | 12 " |
| | New | 4-H R-4 | 12 " | 12 " | 12 " |

B. Training

An Extension Service capable of vigorous implementation of programs progressively increasing in scope will require the following staffing pattern to be established as rapidly as possible:

Director, Extension Service
Deputy Director
Branch Chiefs - Agriculture
 4-H
 Home Economics
 Extension Information
 Training and Reports
 Subject Matter Specialists

Three regional supervisors to report directly to the Deputy - Region No. 1: Northern, Kassala and Blue Nile
 Region No. 2: Khartoum, Kordofan and Darfur
 Region No. 3: Upper Nile, Bahr El Ghazal and Equatoria

Subject matter specialists to work out of the National Office:

| | |
|---------------------------------|------------|
| Agronomy | Poultry |
| Agricultural Engineering | Fruit |
| Entomology | Vegetables |
| Plant Pathology | Clothing |
| Food Preparation & Preservation | |

Distribution of Extension field offices as follows:

Khartoum Province. Provincial Office - Khartoum*;
Districts - None.
Blue Nile Province. Provincial Office - Wad Medani;
District Offices - Sennar*, Kosti*, Singa.
Upper Nile Province. Provincial Office - Malakal*,
District Offices - Renk, Melut, Akoba.
Bahr El Ghazal Province. Provincial Office - Wau;
District Offices - Rumbek, Aweil, Yirol.
Northern Province. Provincial Office - Ed Damer;
District Offices - Shendi, El Banga, Merowe, Dongola.
Kassala Province. Provincial Office - Kassala.
District Offices - Khashm El Girba, Gedaref, Erkowit.
Equatoria Province. Provincial Office - Juba.
District Offices - Maridi*, Yei*, Torit.
Kordofan Province. Provincial Office - El Obeid*.
District Offices - Dilling*, Kadugli*, El Fula.
Darfur Province. Provincial Office - El Fasher.
District Offices - Nyala, El Geneina, Zalingei.

*Offices established as of January 1, 1964.

To staff the above pattern will require the following personnel:

| National Headquarters: | | <u>As of 1/1/64</u> | |
|------------------------|-------------------------|---------------------|-------------------|
| SVII | Director | 1 | |
| B-2 | Deputy Director | 1 | |
| B-1 | Branch Chiefs | 6 | D/S - 1 |
| B-1 | Regional Supervisors | 3 | |
| B-1 | Subject Specialists | 6 | |
| Field Offices: | | | |
| DS | Provincial Officers | 9 | D/S - 3 |
| DS | Sennar Training Officer | 1 | |
| Q cr JK | 4-H Agents | 9 | |
| Q | District Officers | 23 | Q = 3 |
| JH | Junior Extensionists | 34 | JH = 15 |
| K | Local Extensionists | 132 | K = 1 |
| JH | Poultry Specialists | 30 | J = 5 |
| | | | GR III - 40 |
| | | | GR-I7- 7 |
| | | <u>255</u> | Total - <u>75</u> |

The above organization has a field force of one Extension worker for every 8,700 farm families. This is not adequate, but the suggested geographic distribution is such that a well trained force properly supported will make maximum impact on the agricultural sector for the money invested.

It should be kept in mind that this is the objective, toward attainment of which USAID/GOS efforts should be directed. It has not been and cannot be attained in one year. A substantial start has been made and a phased program is needed to avoid waste of money.

Participant Training Schedule

| <u>FY</u> | <u>No.</u> | <u>Field of Training</u> | <u>Duration</u> | <u>Location</u> | <u>Cost</u> |
|-----------|------------|--------------------------|-----------------|-----------------|------------------|
| 64 | 1 | Journalism (B.S.) | 2 years | U.S. | \$ 4,900 |
| | 1 | Info. Planning & Admin. | 1 year | U.S. | 4,900 |
| | 1 | Offset Printing | 6 months | 3rd C. | 2,360 |
| | 3 | Extension Seminar | 1 month | 3rd C. | 1,800 |
| | 1 | Extensions from 63 | 1 year | U.S. | 4,250 |
| | | | | | <u>\$ 26,710</u> |
| 65 | 9 | Extension Operations | 7 months | U.S. | \$ 37,800 |
| | 5 | Extn. Admin. (M.S.) | 2 years | U.S. | 24,500 |
| | 2 | Extensions (M.S.) | 1 year | U.S. | 8,560 |
| | 5 | Extn. Poultry Spec. | 7 months | U.S. | 24,000 |
| | | | | | <u>\$ 94,800</u> |

purchase orders attached for details and specifications of U.S.A.I.D. commodity purchases.

FY 64:

| | |
|---|------------------|
| 4 Vehicles required to replace project vehicles for use of U.S. technicians | \$ 20,000 |
| Books | 25 |
| Garden Seeds to support 4-H program | 92 |
| Garden hand tools to support 4-H program | 832 |
| Photographic equipment for Extension Information Production Center | 2,970 |
| Code 899 | 2,500 |
| Freight | 1,581 |
| | <u>\$ 28,000</u> |

FY 65:

| | |
|----------------------------|------------------|
| Seeds | \$ 1,000 |
| Publications | 1,000 |
| 4-H Supplies and aids | 3,000 |
| Training film | 10,000 |
| Teaching aids and supplies | 1,000 |
| | <u>\$ 16,000</u> |

E. Construction

Funds are provided in Project Agreement 650-11-190-083 for buildings to be used in project 650-11-110-065. Maintenance of buildings already constructed and other construction are and will remain the responsibility of GOS.

F. Other Costs

There are no other costs involved in this project that are to be provided by U.S. direct dollar grant financing.

G. Local Currency Costs

With the exception of counterpart support funds described in Project 650-11-190-083, there are no costs involved in this project that are to be paid by U.S. owned local currency.

H. Government of Sudan Contribution

Expenditures will be met from funds from national and provincial budgets as follows:

| | <u>Personal Services</u> | <u>Supplies & Equip.</u> | <u>Land and Structures</u> | <u>Other</u> | <u>Total</u> |
|----------------------------|--------------------------|------------------------------|----------------------------|--------------|--------------|
| <u>Dept. of Agric.</u> | | | | | |
| Central Budget | \$ 14,450 | \$ 6,936 | \$ 16,340 | \$ 6,069 | \$ 43,795 |
| Provincial Budget | 78,030 | 92,480 | 107,130 | 16,617 | 294,257 |
| <u>Dpt of Lvstck Prod.</u> | | | | | |
| Central Budget | 10,115 | 2,890 | 17,390 | 8,670 | 39,015 |
| Provincial Budget | - | - | - | - | - |
| Total FY 64 | \$102,595 | \$102,306 | \$140,860 | \$31,356 | \$377,067 |
| Total FY 65 | \$103,000 | \$103,000 | \$141,000 | \$35,000 | \$382,000 |
| Total FY 66 | \$110,000 | \$110,000 | \$145,000 | \$35,000 | \$400,000 |

IV. Progress to Date

USAID assistance began in 1959 under Project No. 650-19-012 in demonstrating the possible usefulness of an Agricultural Extension Service, and in aiding the Ministry of Agriculture in setting up the basic framework for such a service. As a result of this project, the Ministry established an Agricultural Extension Section within the Education Division of the Department of Agriculture. Provision for budgetary support of Extension by Provincial Councils is contained in the 1960 Provincial Act.

Subsequently the project became 650-A-11-AA, and this continuing project is now known as 650-11-110-065. The only modification is that it is no longer a basket project containing multiple activities. This work plan therefore deals exclusively with joint USAID/GOS activities to strengthen the Extension Service of Sudan during U.S. fiscal year 1964.

The program began in 1959 with two pilot provinces, Equatoria and Kordofan. In 1960 the Supreme Council authorized the Department of Agriculture to establish Extension units for each province council, and offices were established in Blue Nile and Upper Nile. As of January 1, 1964, additional units have been established for Khartoum Province and the Information Center at Khartoum North is physically completed.

During the first five years of operation USAID has contributed (a) 24½ man years of technical assistance, (b) US and third country training for 23 participants, and (c) commodities costing \$92,000.

Remaining to be done in order to assure an effective Extension Service are the following:

1. Establish a headquarters capable of supplying effective logistical support for the field force suggested under "Training" above.

2. Develop a corps of subject matter specialists.
3. Upgrade Shambat so it can supply qualified recruits on a continuing basis.
4. Establish an organized in-service training program policy.
5. Open field offices in the four remaining provinces.
6. Establish policy to assure smooth flow of research results through extension to the farmers.

CONCLUSION

This material has been compiled and presented by two USAID/Sudan Extension advisors with a cumulative Extension experience of 57 years, of which 17 have been spent in the countries of Ecuador, Saudi Arabia, Iraq, Iran, Nigeria, and of course Sudan. It should be clearly understood that this is not a policy paper of USAID/Sudan. It is instead the considered judgment of the authors for the development of an Extension Service capable of successfully assisting the agricultural sector of Sudan to meet its commitments in the Ten Year Development Plan.

If accepted in its entirety, as a package, with allotment of budget and personnel as suggested, it has an excellent chance of success. If, on the other hand, it is implemented piece meal and/or subjected to periodic attrition for the sake of fiscal expediency, its chances for success are extremely limited.

Two essential ingredients must be supplied by Sudanese personnel and cannot be contributed in any form by outside influence:

1. A will to work
2. A sincere desire to help their fellow countrymen.

With these two essential ingredients, the Extension Service of the Sudan is assured of a long and productive career.

The decision rests with the Government of the Sudan.

**PRODUCED BY THE INFORMATION PRODUCTION CENTER,
DEPARTMENT OF AGRICULTURE, KHARTOUM**