AGRICULTURAL DOCUMENTATION CENTRE, KENYA

Preparatory Mission Report

Sept. 14, 1972

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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Chapter 1: INTRODUCTION

a) Origin and Sponsorship of Mission

In August 1971 the Ministry of Agriculture, Republic of Kenya, applied to FAO for technical assistance in micro-filming and indexing of agricultural documents related to Kenya. The FAO Documentation Centre has undertaken to assist developing countries in establishing documentation centres to facilitate access to documents. Such centres have already been set up in Morocco, Algeria, Senegal (Documentation Centre of the Organization for the Development of the Senegal River Basin) and Liberia (Documentation Centre of the West African Rice Development Association). Similar centres have been proposed for several other countries and a number of projects are, therefore, at various stages of preparation. In January 1972 FAO and SIDA agreed on a preliminary investigation of the project as regards policy, related projects, location etc. The present study was made to provide the information on which a recommendation concerning a Documentation Centre could be made.

The Mission took place between August 7 and September 15, 1972 and was carried out by Mr. S. Cooney, An Foras Taluntais, Dublin, FAO representative, and Mrs. M. von Reviczky, Agricultural College of Sweden, Alnarp, SIDA representative. The preliminary mission was organized by the FAO Documentation Centre and the cost was borne by SIDA of Sweden. Working accommodation in Nairobi was made available by the local SIDA office. Introductions were arranged and certain other facilities provided by the office of the FAO Senior Agricultural Adviser in Nairobi and by the Ministry of Agriculture. The mission team wish to express their appreciation to these organizations for their help.

Because of transport problems, certain parts of the mission's work have been made more difficult. This applies especially to visits to centres outside central Nairobi. It has, however, been possible to draw on information regarding some of these centres gathered by one of the team during an earlier mission.

b) Summary of Recommendations

1. The Documentation Centre should be established as early in 1973 as possible. This may be before the Ministry of Agriculture building becomes available in November, provided there is sufficient accommodation and a clear work programme. The Centre should, by the end of 1973, occupy suitably equipped and laid out premises in the new building.

2. The Centre should be set up within the Ministry of Agriculture. It should begin by processing documents relating to agriculture and should proceed by stages to grow into a national agricultural documentation centre, covering government and other agencies. To justify the installation of sophisticated equipment requires that the centre extend at least to national level in due course.

3. The main justification for the Centre will be to provide a service to a wide range of users involved in national development problems. These will include administrators, research scientists, teachers in University and elsewhere, extension workers and others. The Centre should plan from the start for the provision of effective and convenient services to users at the earliest possible date.

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4. The development of the Centre should be co-ordinated with that of certain other activities whose objectives are complementary. Among these, the most important in the initial stage are: the Ministry Library, the Agricultural Information Centre and the Institute for Development Studies (University of Nairobi) programme of research into dissemination of agricultural information. Further related activities will doubtless become relevant as the Centre grows.

5. The project supported by external assistance should continue for three years. By that time a considerable amount of the backlog of documents should have been processed, a system for obtaining current documents set up, a number of indexes published and a service to users established. A general evaluation of the usefulness of the Centre may be the final stage of the project. It is anticipated that, by then, an international information system for the agricultural sciences and technology (AGRIS) will be in operation under the aegis of FAO, which will permit exchange of expertise and information between countries.

6. Documents should be traced, selected and entered into the system according to a logical plan. This should be prepared by the Documentation Centre Staff at the beginning of the project. The sources to be examined at this stage include the Ministry itself, research stations under the Ministry and the agricultural boards, other Ministries, the University, and E.A. Community Centres.

It is important to recognize from the start that many of the most valuable documents are stored at centres outside Nairobi. The Project Manager and Co-Manager should therefore make a tour of these centres as early as possible in the project's work. They should estimate the number of documents to be evaluated at the centres, and the amount of time to be spent by a documentalist at each centre for this purpose.

We offer the following preliminary estimate of the number of documents to be evaluated as a rough guide:

In the Ministry of Agriculture: 100,000
In centres outside Nairobi: 30-40,000
In other ministries and organizations: no estimate available.

We consider there are likely to be 200,000 documents to be evaluated, when all sources have been considered.

7. The Centre itself should be equipped to carry out the greater part of the work itself. We are satisfied that this is feasible. The stages involved are:

Tracing documents
Selection
Analysis and indexing
Microfiche document store
Computer processing of indexes
Printing of indexes
Distribution of indexes
User service (question and answer)

Tracing and selecting documents will require a substantial amount of travel and a vehicle is required under the Centre's own direct control. Computer processing of the indexes will be carried out by the computing service at the Ministry of Finance and Planning. Printing can be done by the Agricultural Information Centre for the Documentation Centre. User services will be provided by the

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Centre's own staff.

8. Recruitment of Kenyan Staff should be planned to allow for the expansion required over the years ahead. The rate of progress will depend on the staff available. Every effort should be made to recruit staff with interest and experience in the type of work involved, if such can be attracted.

    One documentalist should if possible be appointed immediately, and a second at the start of the project. A third should be appointed after a further year. Further expert staff in later years will be required for the growth of the Centre to national status. Attached is a statement of staff requirements to be provided by the donor agency and the Kenya Government during the project.

9. Training of one of the Kenyan staff should begin immediately, i.e. in the academic year 1972/73. This official can then have returned for the start of the project. Training of the others can proceed on the job and in short training trips abroad.

10. External aid budget (3 years) $ 462,500
    Kenya Government Contribution (3 years) K£ 31, 635 $ 90,386

Chapter 2: THE PROBLEM

a) Need for Information to Promote Development

Of a total population of 12 millions, about 85 percent of the working population of Kenya is engaged in agriculture. In the development plan for 1970-74 an increase of this population by 850,000 during the period 1968-74 is foreseen. Of these about 200,000 are to be absorbed outside agriculture, which means that the remaining 650,000 must be absorbed into agricultural employment. The necessity of developing the rural areas is therefore the basis of the whole plan. For its efficient prosectuion, it is important that all relevant information be readily accessible.

To increase the general standard of living in agricultural areas, water and electricity supply schemes will be enlarged and education will be given a more directly practical bias. It is intended to increase the productivity of the arable land by using better methods of cultivation, by concentrating on the most profitable crops and by increased marketing research. It is also intended to develop small farms and areas of the country which have previously not been developed. Of the total development budget, 24 percent is allocated to the agricultural sector during the period 1970-74.

Coffee and tea are the main agricultural exports and accounted for about 30 percent of total national exports in 1970. Maize is the main food of a large part of the population and increased production for consumption as well as for export is planned. Livestock production will be stimulated by expanding livestock research and education, and by special development programmes for range areas.

The forests are valuable not only in providing raw material for industry but also for soil conservation. Forest planting will be expanded, and it is estimated that the timber industry will employ about 32,000 people in 1974, an increase of 50 percent as compared with 1968.

Through the country has large potential for fisheries, both marine and fresh-water, fishing has not been very important in the economy of the country up to now and the consumption of fish is low. During the plan period measures will be undertaken to improve marketing, stimulate consumption and increase exports.

About 25 percent of the industrial production consists of food products and more processing facilities for agricultural products are planned. The development of agriculture is important, therefore, not only in itself but as a base for an expanded food products industry.

b) Users of a documentation Centre

The main categories of users are as follows:

> Policy makers;
> Administrators;
> Research workers (technical and social sciences);
> Educators;
> Extension workers (indirectly through AIC);
> Marketing bodies;
> Experts employed on multilateral and bilateral
>   assistance projects.

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These users are found in a wide range of organizations and locations.

In the Ministry of Agriculture and other Ministries, the administrators and policy makers need background information in planning for development. Many reports now published are too superficial because the background information, even if it exists, is too difficult to obtain and is therefore overlooked.

Research workers at the research stations have great difficulty in finding the results of earlier research and experiments. These are often unpublished, and are kept in files or experimental notebooks. This lack of information often causes duplication of research. At some stations (i.e. the Horticultural Research Station Thika) efforts are made to scan old files before new research projects are started.

University teachers and students, especially in the Faculty of Agriculture need information on research and planning in agriculture. The University Library was not considered sufficiently equipped to provide all the agricultural research information required. The Centre should therefore be a valuable source for teachers preparing lectures and seminars or doing research work, as well as for the more advanced students working on research reports and theses. This also applies to the agricultural colleges.

To advise farmers on cultivation methods, selection of crops, irrigation, fertilization, etc., extension workders need to be aware of the most recent research results as well as of prospects for marketing etc. They obtain most of their information indirectly, through the Agricultural Information Centre (See section 3b), the Provincial Agricultural Offices and similar sources.

International experts require background information on the country as a foundation for their work. The planned Documentation Centre will make this information much more rapidly and conveniently available to them than at present.

c) Quantity and location of documents

The following are the main centres at which document collections requiring evaluation are known to exist. They are arranged in three groups:

- Unpublished
- Published - dealing with Kenya
- Published - of relevance to Kenya.

The quantities have been estimated for the Centres we have visited in terms of metres of shelves. It is possible to derive from this an approximation of the total number of documents.

Sources of Documents

(1) Unpublished

(a) Ministry of Agriculture (main building):

Library	25 metres
Registry	150 m
Individual offices	100 m

The Registry documents may yield a low proportion of useful reports, but it is known that some valuable ones are held there. Documents in individual offices may duplicate each other and the Library,

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but will also include some important new material.

(b) Research stations:

(i) Under the Ministry of Agriculture, there are some 11 research
stations and as many field sub-stations. Of these, we were
able either to visit or telephone the following and assess
the documents stored:

National Agricultural Laboratories, Kabete:

Entomology	7	metres
Soils	7	m
Plant Pathology	7	m
Research Information Service	3.2	m
Officer in charge	2.0	m

National Veterinary Laboratories, Kabete: ...

Kitale - grassland and maize: Library
(wheat files)   1.5 m

Individual offices   ...
Maize files   ...

Naivasha (Animal Production):   8   m

Also 16 bound volumes of
experiment records. This
material dates from 1929 onwards.

Njoro (Cereal Breeding):   4   m

Also 200 notebooks on experiments.

Egerton College, Njoro (250 reports):   0.6 m

Molo (Pyrethrum and Horticulture):   1.0 m

Also 40 notebooks on experiments.

Thika (Horticulture):   5.5 m

Over 100 notebooks on
experiments.
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Total for research stations visited   46.8 m

Among the other research centres, the following were visited by one member of the present mission in 1967:

Mtwapa (Coast Agricultural Research Station), Horticulture and sugar.

Embu, Agricultural Research Station.

Further research stations under the Ministry are at Kakamega, Kisii, Kisumu, Machakos, Molo, Ol Joro Orok and certain other places.

(ii) Under the Statutory Agricultural Boards, which are themselves under the Ministry of Agriculture. A list of these boards is given below, together with some research stations active in the same areas of work.

Agricultural Development Corporation, Nairobi

Agricultural Finance Corporation, Nairobi

Coffee Marketing Board, Nairobi

　　　Coffee Research Station, Jacaranda, Ruiru

Cotton Lint and Seed Marketing Board, Nairobi

　　　Cotton Research Station, P.O. Kibos

Canning Crops Board, Nairobi

Kenya Meat Commission, Nairobi

Kenya Tea Board, Nairobi

Kenya Dairy Board, Nairobi

Kenya Sisal Board, Nairobi

Maize and Produce Board, Nairobi

Pyrethrum Board of Kenya, Nakuru

Uplands Bacon Factory, Uplands

The Wheat Board, Nairobi

National Irrigation Board, Nairobi

　　　Ahero Irrigation Unit, P.O. Byanza, Kisumu

　　　Tana Irrigation Research Unit, P.O. Galole, Malindi

　　　Perkerra Irrigation Research Unit, P.O. Marigat

Kenya Tea Development Authority, Nairobi

(iii) Other research stations with an agricultural orientation:

Tea Research Institute of East Africa, P.O. Box 91, Kericho

Welloome Trust Research Laboratories, P.O. Box 30141, Nairobi.

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(c) <u>National Archives</u>:

    (i) Ministry of Agriculture: 3,000 closed files.

(d) <u>Other Ministries</u> (documents relevant to Agriculture):

    (i) Ministry of Finance and Planning.
    (ii) Ministry of Natural Resources:

        This Ministry includes Forestry and Geology. Among its
        research stations are those on Forestry, including one at
        Kikuyu, Nairobi.

    (iii) Ministry of Tourism and Wildlife:

        The Game Parks of Kenya, including the wildlife research
        units, fall under this Ministry. So also do Fisheries and
        Fishery Research, both Freshwater and Marine.

    (iv) Ministry of Lands and Settlements.
    (v) Ministry of Health (including Nutrition, and disease which
        are associated with agricultural development, including
        Irrigation).

    (vi) Ministry of Co-operatives.

    (vii) Ministry of Commerce and Industry:

        Concerned with the marketing of agricultural products.

(e) <u>East African Community research centres</u>:

    The most immediately relevant of these are:

    East African Agricultural and Forestry Research Organization,
    Muguga.
    East African Veterinary Research Organization, Muguga, and the
    East African Tropical Pesticides Research Organization, Arusha,
    Tanzania.

        The archives in the last mentioned include the following
    collections of documents (including published and unpublished)
    based on figures gathered in 1967:

        Plants, insecticides: 12 boxes; Weather, spraying: 12 boxes;
    Entomology, Resistance: 10 boxes; Tsetse: 11 boxes; Mosquitoes:
    12 boxes; World Health Organization: 30 boxes.

        Other East African Community research organizations are:
    EA Trypanosomiasis organization, Tororo, Uganda; EA Virus Research
    Organization, Entebbe, Uganda; EA Freshwater Fisheries Research
    Organization, Jinja, Uganda; EA Malaria Research Institute, Amani,
    Tanzania.

        There are also certain advisory committees set up by the

Community, which generate reports that should be evaluated for inclusion in the Centre.

(f) University Theses and Research Reports:

(i) From the University of Nairobi, including the Faculty of Agriculture, the Faculty of Veterinary Medicine, the Institute for Development Studies and other sections within the university which produce reports and theses relevant to agriculture in Kenya.

(ii) From universities outside Kenya, including particularly the University of Dar es Salaam, Tanzania and Makerere University, Kampala, Uganda. Numerous universities in Europe and North America also generate reports on Kenya from time to time.

(g) Documents thought to be in possession of expatriates who have returned home:

It is known that many expatriate research workers in Kenya brought their work records with them when they left. In a number of instances, no duplicate was left in Kenya. This was true both of expatriates who left after Independence, and also of those who have worked in Kenya since then.

It is important that a systematic effort be made to obtain this documentation from those who have left. It is also important that the existing rule that data be left with the authorities by expatriates going home be enforces. Such documentation should be made available to the Documentation Centre for evaluation.

(2) Published Documents dealing with Kenya

A need was expressed by several of those interviewed for indexes to collections of published documents stored at various centres. The following information on the location of these collections is therefore included:

(a) Ministry of Agriculture:

    (i) Library; 17.7 metres.
   (ii) Branch Libraries; especially the National Veterinary Laboratories, where the library holds a file of published papers by staff going back many years. There is also a volume of papers by staff at Naivasha research station.
  (iii) Research programmes.

(b) Other Ministries: Libraries and research programmes.

(c) University of Nairobi Library.

(d) "Plant Science in East Africa"; T.M. Judy, University of West Virginia Library, 1971 (a 5-volume bibliography).

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(e) Institute of Tropical Agriculture, Amsterdam.

(f) Commonwealth Agricultural Bureaux, Farnham Royal, U.K.

(g) Library of Congress Regional Office, Nairobi:
     Accessions lists -- "Publications of Eastern Africa".

(3) Published Documents relevant to Kenya

Many organizations, especially research centres, have collections
of reports and reprints drawn from world sources over a long period of
years. Some of these may prove to have a continuing relevance, while
all of them were originally collected on the assumption that they
would be useful in Kenya. A need was expressed for indexes to this
material.

The nucleus is in the records of the East African Literature
Service, at the joint EAAFRO/EAVRO Library, Muguga, near Nairobi.
The service has been issuing some 20,000 pages of photocopy each month
for five years. These are drawn from scientific journals and are
supplied to scientists throughout East Africa. We have seen collections
of these reprints at Thika, Naivasha, Molo and Njoro, and know that
there are collections at other centres also.

A central record of the material issued since the service began in
1967 is kept at Muguga, but is not at present indexed due to shortage
of staff.

MAP OF KENYA

On this map some of the research stations where unpublished and published documents
may be found have been marked. The map illustrates the wide area over which
documents are dispersed within Kenya.

Lake Rudolf

Kitale

Molo

Thika

Nakuru

Kisumu

Lake
Victoria

Nairobi

Njoro

Malindi

Mtwapa

Mombasa

Naivasha
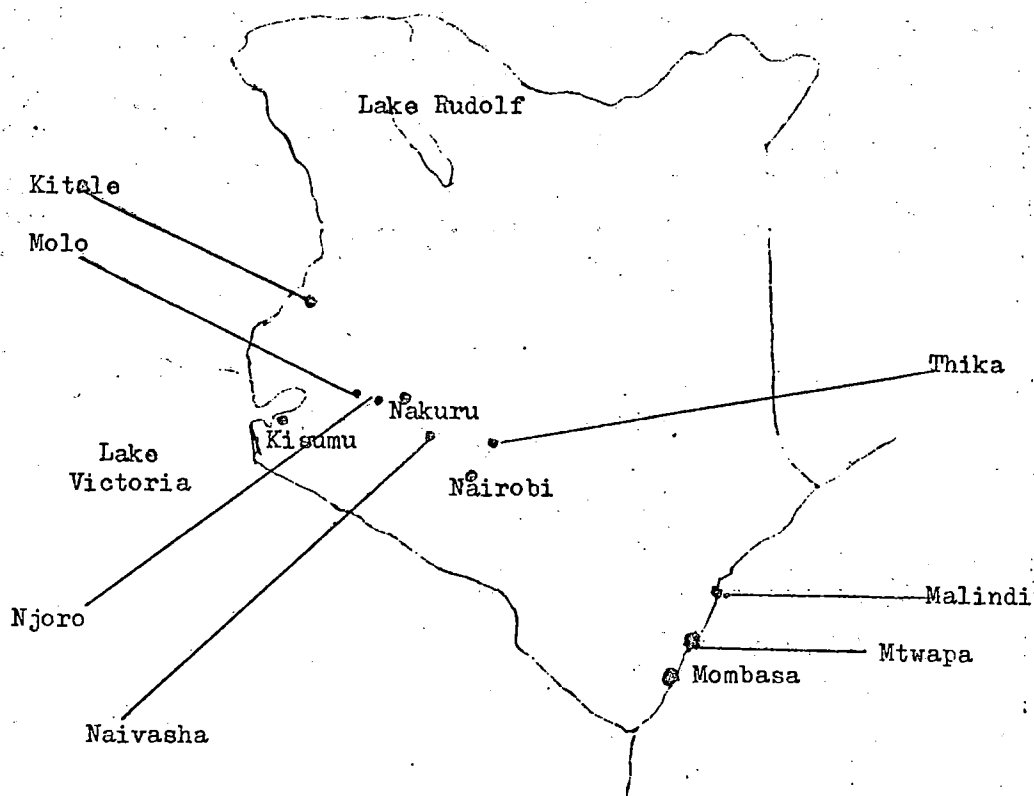
Chapter 3: POLICY ASPECTS

a) Development to National Status

The FAO Documentation Centre, through technical assistance projects, is endeavouring to establish national documentation centres in agriculture, and/or documentation centres for groups of countries, wherever the circumstances make it advisable and possible to do so.

In East Africa, to start the Centre at regional level would present many administrative and political problems. Questions such as where the centre should be placed in the Region and whether national governments were prepared to release unpublished documents to it, would have to be agreed within the Region and this would take a considerable period.

To start on the national level would also involve agreement among various agencies as to the most appropriate location of the centre. Furthermore, the application in the case of Kenya was initiated by the Ministry of Agriculture with the approval of the Ministry of Finance and Planning. The Ministry of Agriculture is now committed to take action to organize its documents, and has moved further towards action than other Government agencies which suffer from the same problem. The officials of the Ministry whom we met were convinced of the need to get something started soon to meet an existing need.

We recommend that the centre be started within the Ministry of Agriculture. It should first concern itself with the unpublished internal reports of the Ministry. The identification, obtaining and processing of documents must, of necessity, proceed by stages. When the Ministry documents have been dealt with, the Centre should make its expertise and technical facilities available to other Ministries and Government Agencies to organise their documents, first in agricultural topics and then generally. In this way the Centre could develop into a national documentation centre. This strategy was acceptable to officials of the Ministry of Agriculture, while officials of other Ministries approved and supported the idea of a Documentation Centre in the Ministry of Agriculture provided its facilities were extended to their Ministries later.

The extension of the project in this way might be done by training documentalists and indexers from other Ministries at the Centre. They could then evaluate and index the documents in their Ministries and pass them to the Centre for microfilming, computer processing and printing and general user service functions.

b) Related and complementary activities

The Mission found a number of related projects in progress or planned. None of these duplicated the function of the proposed Documentation Centre, but many could provide important complementary functions, either by covering information of kinds not suitable to the Centre, or as users of the Centre.

The complementary projects are the Ministry of Agriculture Library, the Institute for Development Studies, University of Nairobi and the Agricultural Information Centre of the Ministry of Agriculture.

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Committee on the Dissemination of Scientific and Technical Information (Institute for Development Studies; University of Nairobi)

Starting from a wider discussion, this Committee has decided that dissemination of information in agriculture should be the priority area. The IDS is already engaged on field studies on methods of dissemination for farmers. In this they co-operate with the Ministry of Agriculture and with local extension officers. Their research in this area has advanced considerably.

The Committee has also organized a seminar representing a range of interested organizations and plans a second seminar in the near future. Its work in this direction has been supported by the Ford Foundation, which appears to maintain a continuing interest.

The members of the committee welcomed the proposed Documentation Centre as an essential source of information anddocuments to be processed by their programme into a form suitable for dissemination to extension workers and farmers. Their own proposals included such a centre, but as their primary interest is in dissemination they are very happy to see the documentation function assumed by the Ministry of Agriculture, and to use its services.

The Documentation Centre and the IDS dissemination proposals are, therefore, complementary. Each is likely to contribute greatly to the success of the other. The success of the Documentation Centre will be judged in Kenya by its results in terms of service to users. The IDS Dissemination Programme provides an essential interface between the Centre and the farmers and extension workers, who must achieve the targets in the Government's plan for agricultural development. The Documentation Centre is essential, also for the success of the Dissemination Programme, since the basic information to be disseminated would otherwise have to be assembled from a large number of collections, many of them ill-organized and unindexed.

In view of the involvement of both SIDA and the Ford Foundation in supporting the work of the Institute for Development Studies on the one hand and of SIDA and FAO in the Documentation Centre proposal on theother, it might be useful if FAO, SIDA and the Ford Foundation were to discuss methods of keeping the development of these two projects in phase with one another.

Agricultural Information Centre, Kabete

This centre has been in operation since 1969. Its function is to prepare information in a suitable form for farmers and junior advisers. It is also active in radio and film work for the same audience.

Normally, the staff of the Centre collects such information as they can find and use it to draft leaflets or scripts. These are sent to research workers for revision. The work has at present to be done with very limited staff. In any case, the function of the Centre is to disseminate information by proper presentation etc., rather than to trace information. Far too much of their time is at present devoted to attempting to gather the information from libraries and scientists at the various research centres.

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Mr. Mwangi, the Officer in charge, felt that the Documentation Centre would be invaluable to his work. It should be able in due course to provide him with documents containing the latest and most important information on the topics of interest, and permit his staff to concentrate on the task of writing, laying out and issuing leaflets and other dissemination material. He considered that nearly all the information he required was at the various research centres, not at the Ministry library. The Documentation Centre would relieve the Agricultural Information Centre of the need to visit these centres often to get information on specific subjects.

A recent FAO mission under Mr. Benaissa has recommended a greatly expanded rôle for the Agricultural Information Centre. We recommend that this development be planned in conjunction with that of the Documentation Centre and the IDS programme of research on dissemination. We consider furthermore that the Agricultural Information Centre should be transferred to the new Ministry of Agriculture building, and housed near the Library and Documentation Centre.

This would permit requests for information to be presented at one place, and directed to whichever centre was appropriate with the minimum of confusion. The typographical and layout skills of the AIC would also be available for use by the Documentation Centre in preparing indexes for publication.

We further recommend that the printing facilities of the AIC, which we understand are a service to the Ministry in general, be used to print the Documentation Centre's indexes. It would not be necessary to move these printing facilities from Kabete, but it would be desirable to instal a second lithograph printing machine and (at the new Ministry building) facilities for preparing the printing plates required.

Library of the Ministry of Agriculture

The Library should function as a complement to the Documentation Centre in providing information to users. Questions that cannot be answered fully by the Centre should be passed on to the Library for search in the catalogues or in abstract journals.

However, since the Library is not now able to furnish this information efficiently, an improved Library service ought to be planned. The Library should have facilities to organize, catalogue and classify its old material. The new material is already being classified according to the UDC; if this could be done also for the older material the Library would be able to provide an efficient service. It might also be appropriate to subscribe to more abstracting journals to gain better access to world literature.

All this requires an extension of the qualified staff at the Library.

Co-operation in the answering of questions also makes the location of the Library and the Documentation Centre as close as possible to each other desirable.

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c) <u>Possibility for Continuing Project after External Assistance ceases</u>

This will depend on several factors:

1. Continued financial support by Government.

2. Staff trained to a level which enables them to maintain the Centre.

3. Facilities (computer, microfiche and other) serviced and maintained reliably. See Chapter 4, (c) and (d).

4. Active use by wide range of users to have attained a high level. See Chapter 2, Chapter 3 (b) and Chapter 4 (b).

To a degree, No. 1 depends on the other three, as well as on the priorities set by Government. No. 3 and No. 4 are dealt with elsewhere. As to No. 2 (training) we do not have apprehensions on this score, <u>provided</u>:

(a) The staff required can be recruited.

(b) The training programme begins immediately. There may be SIDA funds in 1972 to support training abroad for one documentalist. We have made enquiries regarding suitable training centres in the US, Canada and Europe (See Chapter 5 (b)). A month at FAO in Rome should form part of the training schedule. At least one documentalist should go for training immediately in order to have returned by the completion of the new Ministry of Agriculture Building in late 1973.

(c) The methodology of the Centre, both input and output, is specified carefully in operational detail and in an easily understood way. This applies especially to the procedures for cataloguing and indexing of documents according to the FAO system. The manuals should be prepared by the Documentation Centre staff in consultation with FAO, Rome.

Chapter 4: OPERATIONAL GUIDELINES

a) Tracing documents, estimating work load, arranging to obtain access

In planning the work during the early months of the project the following questions will need careful attention:

(i) Unpublished, published in Kenya;
Published, of relevance to Kenya.

The highest priority is given to unpublished documents, both administrative and technical. However, it must be remembered that unpublished reports, particularly internal documents of a research station, may later be published. In evaluating unpublished material from the past, therefore, some attention should be paid to ensuring that it has not appeared later among published reports.

The order of priority in studying unpublished material should be:

First: printed reports of limited circulation.

Second: cyclostyled reports.

Third: tapewritten reports.

Fourth: draft reports substantive correspondence.

Fifth: original data records (i.e. research).

Every effort should be made to ensure that the lower priority tapes of documents have not been duplicated in a more finished and therefore higher priority format.

The second priority is given to published papers and reports regarding Kenya. Those appearing in publications in Kenya will be relatively easy to obtain. Those appearing in publications in Kenya will be relatively easy to obtain. Those appearing in world literature are more difficult. There are, however, some research stations where files of such papers, published by station staff, are kept (notably the National Veterinary Laboratories, Kabete). These can form a nucleus. The Documentation Centre should from the outset request all scientists and administrators to supply copies of their own past and current publications and any they may have by other authors.

The third priority, should staff and facilities be available, is given to published material of relevance to Kenya agriculture, although not specifically dealing with work in Kenya. On the research side, there is a large nucleus of papers supplied through the East African Literature Service since 1967. This material has been selected by scientists as relevant to their own research on Kenya problems. A need has frequently been expressed for an index to this material.

(iii) Past and current material

The estimate we have given, of up to 200,000 documents, relates to past reports. A large proportion of this material will be found to be of little importance or to be out of date. The detailed assessment will be part of the evaluation stage, but preliminary judgement should be made at the early stages regarding the most important categories of documents traced. These can be given attention in the preparation of the first indexes.

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Current output of reports could not be estimated accurately. However, we have had indications that a substantial volume of material is emerging from the Ministry, the research stations and the Institute for Development Studies. Arrangements should be made as early as possible with all agencies producing reports that they will supply copies to the Centre.

The project staff will then need to consider the most appropriate way to allocate their resources and time between past and current documents in regard to the production of microfiches and indexes. The current material is likely to be in demand by users, but the most valuable of the past reports will also need to be processed at an early stage.

(iii) Subject

In assessing the volume of documents, and the urgency on processing them, the subject will also be important. Priority subjects can be defined from the Government's Development plan 1970-74 and its revisions, as well as from discussions with various user groups during visits and seminars. In addition, any documentation on neglected topics which appears valuable should be given high priority. It is therefore of great importance that the evaluation be made by a person with a solid knowledge of Kenyan agriculture and of Government planning objectives.

(iv) Location

The material is widely dispersed. It would be convenient to process all the material at each location before proceeding to the next. This, however, would not allow a rational plan to be adapted as regards subjects or published/unpublished material. On the other hand, to visit the centres outside Nairobi more than once may be considered wasteful. The Project Manager will therefore need to formulate a strategy for processing documents at different locations which takes into account both the optimum groupings of documents for the convenience of the user and the optimum use of the resources of the Centre.

There is likely to be considerable duplication of documents in different government officials' offices. Much duplication will also exist between research stations and the Ministry Library and Registry. Some mechanism to reduce to a minimum the time involved in checking for duplication should be introduced at an early stage.

(v) Lost reports

It is known that reports and other records of past research and surveys have been lost. In some case, the existence of the material can be inferred from Ministry Annual and other reports, and from research programmes. In other cases, expatriate research workders have taken away their records when they left. The Centre should assume responsibility for tracing as much of this material as is considered valuable. One way of doing this is by approaching former expatriate employees to obtain their reports and for information on where reports other than their own may be found. For this purpose, lists of former expatriates could be compiled from Ministry records.

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(vi) Authorization to access documents

The importance of arranging such permission where necessary cannot be over-emphasized. In the case of the Ministry, no problem is foreseen in obtaining access to documents in the Library, the Registry and individual offices. In the case of the National Archives, other Ministries and E.A. Community Organizations, the Ministry will require to arrange formally for permission. In regard to non-government bodies the Ministry can doubtless also make arrangements. Research stations may, in some cases, require formal arrangement.

b) Evaluating and selecting documents

This will be done within an overall plan constructed on the basis of the general survey in a) above.

The same criteria will apply at the specific level here, as at the general level of a). There is no need, therefore, to repeat the points.

The staff of each location should be consulted regarding the value of the documents held there and on any duplicates or earlier or later versions that may be found elsewhere.

c) Analysis and indexing

Whichever system is used, there is a need to prepare bibliographic descriptions and to choose index terms for each document. This work will generally be carried out at the Documentation Centre. In the case of field stations, however, the microfilming, analysis and indexing could possibly be done on the spot. The micro-fiche images, and the bibliographic and indexing information, could then be brought to the Centre, while the documents remain at their original location.

The indexing system by keywords, used by FAO in Rome, has already been adapted for use under local conditions in Morocco, Algeria and other documentation centres mentioned above. It is now in course of revision in connection with the AGRIS and CARIS international information systems. The revised system may be available shortly after the Kenya project starts.

It is important that the project team be provided with a clearly written manual on analysing and indexing and that they be thoroughly familiar with the sequence of operations to be performed on each document. This will form the most critical part of the training schedule.

d) Document Store

When the documents have been identified it is necessary, in addition to indexing them, to develop a central store where copies of the originals may be obtained. This can be done in several ways. We have considered the following.

(i) File of original documents

Copies may not be obtainable of some documents known to exist. The copies are also subject to removal from the Centre under some circumstances and so might be lost. The storage space required would also be considerable. While we do not consider this a suitable solution, we do recommend that the Centre, when it can obtain possession of original documents, should store them if space is available.

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(ii) File of photocopies

This is too expensive a solution, copying and storage being both costly and documents, as in (i), subject to removal. However, documents which can only be obtained on loan can be filed in this way.

(iii) Roll microfilm

This method is free of most of the problems of the previous two. It takes little space and is not costly, and the micofilm is unlikely to be removed. There is one major disadvantage, however, the roll microfilms are an inconvenient method of storing documents which require to be easily retrieved. They are entirely suitable for historical and administrative records (as in the Kenya National Archives) and commercial records. The Documentation Centre, however, must be equipped to provide users with documents rapidly and conveniently. For this reason we recommend the fourth method.

(iv) Microfiche

This system provides a microfilm record of each document which is rapidly retrieved when required. Equipment is available for reading the fiche, for duplicating it and for reproducing it in full size paper copy form. Microfiche is used in the FAO Documentation Centre, in the FAO documentation field projects, and also by most international organizations and information systems.

Different systems for Microfiche are available. FAO recommends an automatic camera, costing $ 25,000, with automatic processing equipment. The manufacturers do not as yet maintain servicing bureaux in Kenya. We have examined an alternative system supplied by one firm, which does provide servicing in Nairobi. This alternative system has certain important advantages:

- It uses a portable camera, which could be transported to research Centres and other places where documents were to be evaluated. This could be done using the normal transport, which carried the documentalist. It would eliminate the need to transport the documents to the Documentation Centre for microfilming, as would be necessary with the FAO system. This system also has automatic exposure control, and is therefore independent of voltage fluctuations.

- It appears to be the least expensive system we have considered.

Against this the system does not conform to the UN or other international standards for microfiche format. There are indications that certain manufacturers are investigating ways of transferring 16 mm roll microfilm images to standard format fiche. In anticipation of progress in this direction, we recommend that the FAO equipment be installed, together with a portable 16 mm unit for making microfilm of documents in widely dispersed locations. It will also be necessary that the manufacturers of the FAO type equipment provide servicing at reasonable cost in Nairobi.

The normal operational procedure for microfilming would then be:

- For documents in or near Nairobi: Bring the selected documents to the Centre (microfilm them on the automatic microfiche camera and return them if required.)

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- For documents at stations outside Nairobi: Microfilm the documents on the spot, with the portable camera. Bring the film to the Centre, and store it until it can be transferred to standard fiche. In this case, the reader/printer can be used to provide hard copy enlargements from the roll microfilm until fiche are available. Alternatively, a duplicate of the film may be put into microfiche jackets on contract by a photographic supplier. The original film would then be stored until it could be converted to standard fiche, perhaps at FAO in Rome.

e) Production of Bibliographies and Indexes

Computer facilities in Nairobi for implementing the FAO indexing system are good. There are between 20 and 30 computers in Kenya. The most appropriate centre to carry out the work appears to be the computer centre at the Ministry of Finance and Planning. This is being developed as a national computing centre for Government agencies, and has the capacity and interest to undertake the work. It might not be necessary in the case of Kenya to have the first indexes prepared on outside contract.

We recommend that the FAO system of computer processing be used by the Kenya Documentation Centre. The capacity to implement it exists. The use of a manual system would perhaps be cheaper in the early stages. It would not, however, be much cheaper, since all the other stages of document handling would be unchanged, and manual production of indexes would also involve considerable labour costs.

The use of a computerized method such as the FAO one will also provide Kenya with the basic skills for participating in international information systems. Among these, AGRIS (International Information System for the Agricultural Sciences and Technology) and CARIS (Computerized Agricultural Research Information System) and a number of magnetic tape abstracts services (Chemical Abstracts, International Food Information service, etc.) may prove to be of interest in the next few years. UNISIST, the UNESCO sponsored world scientific information system, is also being developed in co-operation with the FAO/AGRIS system.

In discussion with Mr. Heyer, Chief Statistician, and Mr. Sabitis, at the Ministry of Finance and Planning, the following comments were made regarding the adaptation of the programmes to the Ministry's ICL 1902-A computer.

Adaptation, with the exception of the KWIC-index, will not be difficult or costly. Mr. Sabitis was confident it could be done by one programmer in three weeks, and that the programming staff could readily handle it. The processing cost should be approximately the same as on IBM 360/30. He suggested that it would be worth taking this opportunity of streamlining the system, provided this did not close any development options. This could also help to reduce running costs. The KWIC-index programme would require to be completely rewritten for the ICL machine. This would not present too many problems.

The Mission has reservations as regards the suitability of the KWIC-programme. This programme, in addition to requiring to be rewritten, requires a considerable amount of computer time to run. It is also expensive in terms of printing and paper, expecially for a large number of printed indexes. FAO is at present studying an improved subject index. We have suggested an alternative approach (appendix D) which would use the FAO/AGRIS classification, and give a similar index to that currently produced for the FAO monthly indexes.

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f) Printing the Indexes

It is recommended that printing of the indexes be carried out, on contract, at the printing shop of the Agricultural Information Centre of the Ministry of Agriculture. The work can be completed at the Ministry's bindery. Both facilities are located at the National Agricultural Laboratories, Kabete, Nairobi.

Cover design, layout, introduction and explanatory notes can be prepared at the Documentation Centre with the advice and assistance of the staff of the AIC.

These measures will ensure that those concerned with all stages of the work are in reasonably close contact with each other. It should also reduce printing and publishing costs.

g) Service to users

The concept of a Documentation Centre implies service to users. In this, it differs from an archive or file registry. The Kenya Documentation Centre will prove its worth by becoming an indispensable source of information to several different types of users. The project should from the outset work towards the provision of such a service at an early date, and towards ensuring that it is fully used.

Types of service to users

(i) Printed bibliographies and indexes

These are the primary output of the Centre. They should be issued free to libraries and senior officials at all main user centres as soon as they become available. All indexes should explain clearly in the introduction the exact procedure for making use of the question and answer service. Records should be kept of where the indexes go, for evaluation later of the distribution pattern, and of index use.

The basic type of index consists of bibliographic descriptions with author and KWIC indexes as used by FAO and its field projects on documentation. This format may be used to produce current monthly indexes, which are cumulated annually. It can also be applied to selections of documents from the past, and to special subject indexes, which may relate to priority areas in Government planning (such as irrigation). Specific/generic subject indexes may also be produced.

Other types of index which may be considered are: KWOC-indexes (easier to use than KWIC), and versions in other languages (i.e. Swahili). These will require special development work by the computer centre of the Ministry of Finance and Planning.

(ii) Question and Answer service

Users who have identified reports in the index, or who want reports on particular topics, must be able to ask the Centre to supply these (see flow chart). The reports may be supplied:

- in original form by the library,
- in hard copy enlargements from microfiche or
- as duplicate microfiches (in the last case, only if the user has access to a microfiche reader).

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The service must have certain characteristics which have been shown to be necessary if users are to have confidence in it:

- the procedure for users must be easy and the service readily available,
- the service must be quick,
- the material required must be in the collection.

The question and answer service should be handled through the Ministry's central inquiry point, so that questions requiring material from the library and/or the Agricultural Information Centre can be channelled to them as well as to the Documentation Centre.

Careful records should be kept of the queries handled through the Question and Answer service; these will facilitate evaluation and improvement of the service.

(iii) Reading facilities

The Centre should have at least three of the less expensive microfiche readers, in addition to the reader/printer. These should be kept in a special office with low intensity lighting, and close to the service point and the library reading room. They will be available for users who do not need to take hard copy enlargements away. Such users will include staff of the Agricultural Information Centre who are drafting material for dissemination, University students, and certain Ministry officers who are prepared to study the documents in this way. The readers will also permit the users to make a selection of relevant documents, while the reader/printer will enable them to make hard copy reprints of selected documents which they can take away.

The Centre should also encourage other Centres - especially research station libraries and University departments - to instal low cost microfiche readers, and, if possible, reader/printers. This will enable these centres to use microfiche duplicates, at a much lower cost to the Centre than hard copy enlargements.

Starting date and cost

The service should if possible begin as soon as the analysis of documents has got under way. It should in any case commence with the distribution of the first index to 1,000 documents. Before the completion of the project, the service should be fully established.

One way to make the service easy to use is to make it free to authorized users. It is proposed that, during the period of the project, services to such authorized users be borne by the donor. This will include not only the indexes, but the Question and Answer services and duplicates of reports which are supplied. An estimate for this purpose has been included in the budget. The designation of authorized users will be for the project manager to work out with the Ministry. It is urged, however, that free service be continued on completion of the project, to ensure continued ease of use for users. (This has proved very effective in the case of the E.A. Literature Service, whose costs are now borne by the E.A. Community Organization and which is heavily used).

Publicity

Every effort should be made to ensure that all potential users are aware of the Centre and have the information necessary to enable them to use it. Seminars should be held for different user groups at regular intervals - perhaps every three months - from the publication of the first index.

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Publication of each index should be announced in the press and by circular to possible users who do not themselves automatically receive copies of the indexes.

Some users (e.g. Government officials, research workers, etc.) will use the services of the Centre directly and should come directly to it. Others will receive its services through agencies like University departments (students) or the Agricultural Information Centre (extension workers). Still others will be served through the central inquiry point in the Ministry which will direct some queries to the Documentation Centre; others to the Library and so on. The service channels will require to be worked out by the project team.

Feedback

Users may also prove a useful source of information on sources of documents not yet traced. Some users will know of such documents. The opportunity should be taken, when providing service to them, of writing down such information as they can provide about the current location of important documents in Kenya. This can then be followed up by obtaining such documents and entering them into the system.

h) Evaluation

An evaluation of the use of the Centre's facilities and services should be carried out during the third year of the project. This will be of assistance to the Kenya Government in assessing the value of the Centre at the point where it is assuming the full cost. Such an evaluation was carried out in 1968 in the case of the East African Literature Service, and was the basis of the Community's decision to continue the service after external aid from the Rockefeller Foundation ceased.

Use of the Centre

The evaluation should examine the volume and type of USE made of the Centre, and the general pattern of users. For this purpose, careful records should be kept regarding who receives the printed indexes, and from where inquiries are received.

Usefulness

The USEFULNESS of the services should also be assessed. In this connection, there is a substantial volume of evidence that users' general opinions are not the most reliable source of knowledge on the usefulness of information services. In addition, therefore, a sample survey should be carried out to identify cases where information obtained through the Centre has had a concrete effect on specific policy or research decisions. The "critical incident" method is one of those available for this purpose.

Indirect effects

The impact of the Centre will not be confined to those who use its services directly. The information obtained by direct users will in many cases be passed on to a much larger population. This will take place through personal contact, and especially through the "gatekeeper network".

The evaluation should therefore include a wider population than the direct users. Consideration might be given to tracing the sources of information which have led to a new policy and research decisions. Among these, it would be possible to identify, by suitable survey methods, the particular sources to which access was obtained through the Documentation Centre. The work of Allen at Massachusetts Institute of Technology provides a basic methodology for this task.

CHART II.1

INPUT

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                            ( 1 )
                             |
                    ┌─────────────────┐
                    │ TRACE DOCUMENTS │
                    └─────────────────┘
                             |
                    ┌─────────────────┐
                    │ PERMISSION TO   │
                    │ ACCESS THEM     │
                    └─────────────────┘
                             |
                          ╱  ARE  ╲
                        ╱ THEY IN   ╲
          ┌──────────┤   NAIROBI?    ├──────────┐
          │    YES    ╲             ╱    NO      │
  ┌──────────────┐      ╲         ╱        ┌──────────────┐
  │ BRING TO     │                         │ EVALUATE     │
  │ D. CENTRE    │                         │ AND SELECT   │
  └──────────────┘                         └──────────────┘
  ┌──────────────┐                         ┌──────────────┐
  │ EVALUATE     │                         │ TRANSPORT    │
  │ AND SELECT   │                         │ TO D.C.      │
  └──────────────┘                         └──────────────┘
              ╲         ╱ RECORDING ╲      ╱
               ╲       ╱             ╲    ╱
  ┌──────────────┐   ┌──────────┐   ┌──────────────┐
  │ BIBLIOGRAPHIC│   │ INDEXING │   │ MICROFICHE   │
  │ DESCRIPTION  │   └──────────┘   └──────────────┘
  └──────────────┘        │
              ╲          ╱
           ┌──────────┐
           │ COMPUTER │
           └──────────┘
                │
        ┌──────────────┐
        │ BIBLIOGRAPHIES│
        │ INDEXES       │
        └──────────────┘
                │          ┌──────────────┐
                │          │ QUESTION     │
                ├──────────│ AND ANSWER   │
                │          └──────────────┘
        ┌──────────────┐          │
        │ DISTRIBUTION │          │
        │ TO USERS     │        ( 2 )
        └──────────────┘
```
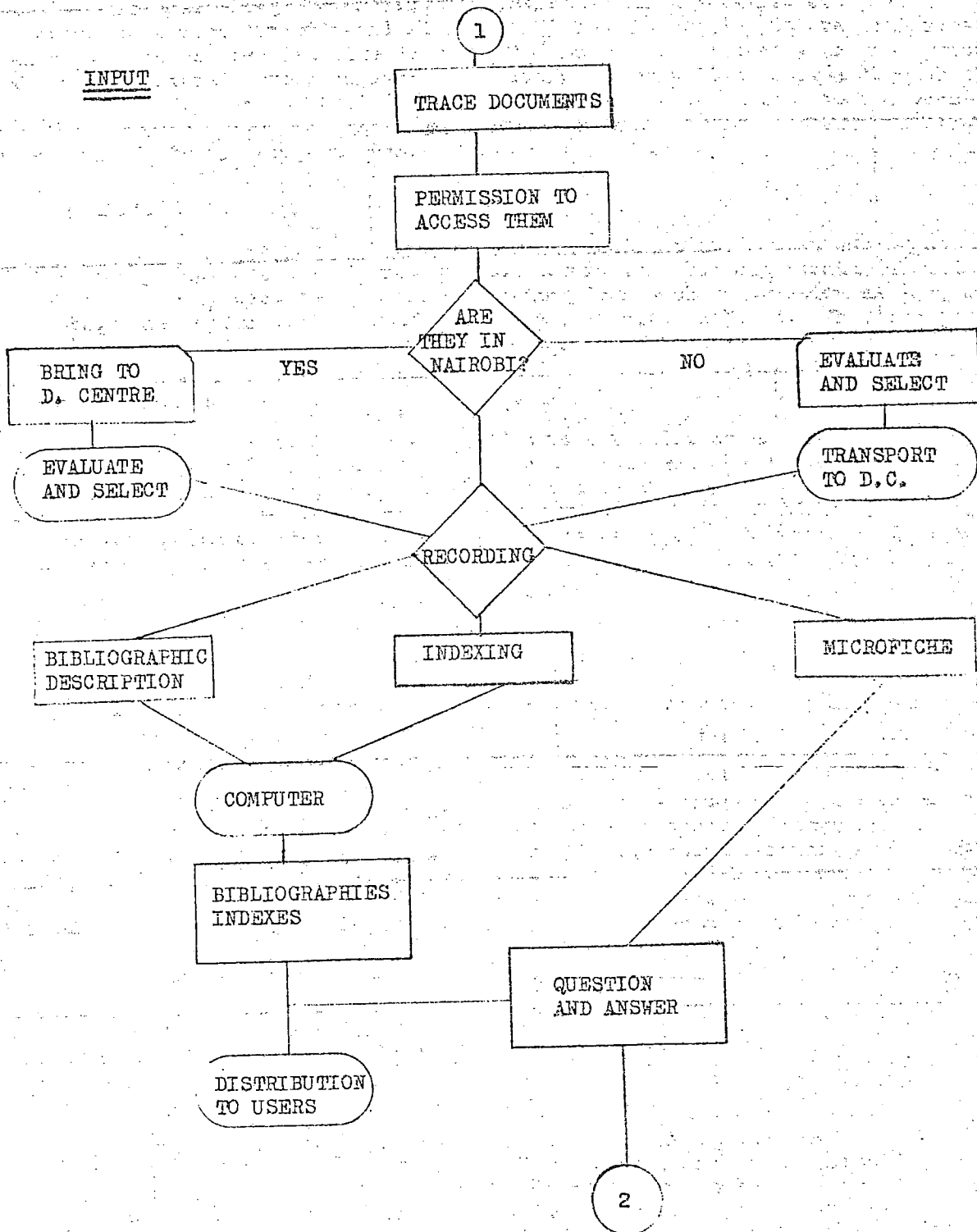
Chapter 5: STAFF AND FACILITIES REQUIRED

a) Donor and Government staff

The preparatory assistance given by the donor at the beginning of 1973 could look after plans for equipping the Centre.

The Project Manager provided by the Donor will be responsible for the project at least during the first two years. During this time the Co-project Manager, locally recruited, will be trained both abroad and during the work and may be able to take over the responsibility for the Centre. If it seems necessary for the continuation and follow up of the activities, the Project Manager should stay for another year. The Project Manager should be a documentalist.

The donor will also provide a documentation officer during the three project years, as well as a project secretary, who may be locally recruited. Should the Project Manager remain during the third year, the documentation officer might not be needed during the same year. Consultants are provided for during the second half of each project year. The locally recruited staff will be trained abroad and on the job. For the Co-Project Manager one academic year and some weeks in Rome at the FAO Documentation Centre are suggested. For the second documentation officer and the photographer shorter training periods will be sufficient.

When the Project Manager leaves, the Co-Project Manager should be ready to take over his responsibilities.

The chart on the next page gives the detailed staff scheme which is proposed.

b) Training

As soon as the decision is made to establish the Centre the first task will be to arrange for training of the local staff. As there is no possibility of getting training in documentation in Kenya at present, the trainee, a graduate in agriculture with at least some experience on various aspects of agriculture, must go abroad for training. The length of the training will be dependent on the place chosen but will probably be about one academic year. Some weeks in Rome at the FAO Documentation Centre should also be included in the training. It would be suitable if training could start immediately in the 1972-73 academic year.

A shorter period of training would be suitable for the second graduate as well as for the photographer. All training should be completed by the middle of 1973.

Training Centres (Documentation and Information Science)

United Kingdom

University College, London, Gower Street, London W.C.1.

Sheffield University, Postgraduate School of Librarianship and Information Science, Western Bank, Sheffield S 10 2TN.

University of Strathclyde, School of Arts and Social Studies Livingstone Tower, Richmond Street, Glasgow C 1.

Queens's University, School of Library Studies, 2 College Gardens, Belfast BT9 6 BQ.

Ealing Technical College, School of Librarianship, St. Mary's Road, Ealing, London W5.

United States

University of Chicago, Graduate Library School, 1116 East 59 Street, Chicago, Illinois 60637.

University of Maryland, School of Library and Information Services, College Park, Maryland 20740.

University of Illinois, Graduate School of Library Science, Urbana, Illinois 61801.

Rutgers University, Graduate School of Library Science, New Brunswick, New Jersey.

Canada

McGill University, Graduate School of Library Science, 3459 Mc Tavish, Montreal 2, Quebec.

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Ministry of Agriculture , Nairobi

New building , to be completed November 197[

Plan of Library/Documentation area only

PLAN I * BASEMENT

GARDEN

LIBRARIAN

LIBRARY : BOOK STACKS

6.10 m

6.10 m

TOILETS

STAIRS

LIBRARY : READERS

LIBRARY
COUNTER

No windows in this wall

Over ground level ; dry

d) Equipment

Microfiche filming and development equipment

Microfiche camera and accessories	25,000
Portable Filming camera and accessories	2,500
Camera for microfilming of maps, plans etc. and acc.	750
MF developing machine	5,300
Title camera and accessories	800
Trimmer	850
Microfiche duplicator and accessories	4,050
Microfiche reader, accessories	1,700
Microfiche readers (3)	1,000

Automatic dry photocopying machine   1,100

Electric typewriter and accessories   750

Special storage equipment

Special storage equipment for MF and some forms	2,800
Metal cupboard for storing magnetic tapes	200
Cupboard for maps, plans, etc.	300
Cabinet for storing punch cards	350

Miscellaneous accessory equipment

Heavy-duty stapline machine	50
Heavy-duty perforating machine	50
Small refrigerator for film material	250
Electric current regulators (3)	800
Water filter	100
Water softener	900

Vehicle   4,000

	53,600
20% estimated freight and insurance	10,900
$	64,500

Supplies and material

Film 105x148 mm for master MF and related supplies	3,000
MF film for map and title camera	400
Diazo MF film sheets and other supplies for MF duplicator	3,000
Reproduction paper for reader/printer	400
Reproduction paper and other supplies for photocopying	900
MF jackets and document processing forms	1,000

	8,700
20% estimated freight and insurance	1,800
$	10,500

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Donor contribution in US $	1972/73 x	1973/74	1974/75	1975/76	Total
10 Personal services					
Project manager (documentalist) P 5		32,000	32,000	(32,000) xx	
Project secretary G 5		8,500	8,500	8,500	
Documentation officer P 3		24,000	24,000	24,000	
Consultants (6 m./m. each year)		18,000		18,000	
Preparatory assistance (6 m./m.)	18,000				
Part-time indexers (agr. students)		1,000	1,000	1,000	250,000
20 Official duty travel (Kenya)		2,000	4,000	4,000	10,000
30 Contractual services					
Computer costs xxx (5 indexes)					
Adaptation costs		1,300			
Key-punching		2,100	4,200		
Corrections		400	800		
Running xxxx		3,300	6,700		
Printing costs (5 indexes)			3,750	3,750	26,300
40 General operating costs					
Free service to users V			2,150	3,750	5,900
6% on total	5,850	5,900	5,400	5,850	23,000
50 Supplies and materials IV		5,500	2,500	2,500	10,500
60 Furniture and equipment IV	64,500				64,500
80 Training					
Co-project manager (11 m.)	7,000				
Documentation officer (6 m.)	5,000				
Photographer (3 m.)	3,000				15,000
90 Project servicing costs 14%	14,470	14,560	13,300	14,470	56,800
TOTAL	117,820	118,560	108,300	117,820	462,500

x)   Expenditure prior to start of the project, otherwise in 1973/74.

xx) If needed

xxx) To be run at the Ministry of Finance and Planning.

xxxx) To be done at the Agricultural Information Centre.

IV   See specification.

V   Free service to authorized users should be provided during at least two years to make the service known. Service to other users may be charged.

APPENDIX A

VISITS

Aug. 7 - 11 ; Sept. 11 - 15

FAO Headquarters, Rome
(briefing and de-briefing)

Mr. R. Aubrac, Director, Office of General Affairs and Information

Mr. G. Dubois, Chief, Documentation Centre

Mr. H. Dierickx, Documentation Officer

Mr. H. East, AGRIS Project

Mr. W. Breitling, Documentation Officer

Mr. R. Gnany, Documentation Officer

Mr. A.E.G. Markham, Senior Liaison Officer (Trust Funds)

Mr. S. de Mistura, Liaison Officer (Trust Funds).

Aug. 14

FAO Regional Office, Nairobi

Mr. L. Stenström, Senior Agricultural Adviser/FAO Country Representative in Kenya

Mr. J.W. Van Gent, Assistant to Mr. Stenström.

Swedish Development Assistance Office, Nairobi

Mr. Jurg Mahner, Programme Officer.

Ministry of Agriculture, Nairobi

Mr. W.W. Wapakala, Deputy Chief Research Officer

Mr. M.H. Motiga, Under Secretary

Miss A.M. Schmohl, Librarian

Miss E. Riria, Assistant

Mr. J.W. Van Gent, Assistant to Mr. Stenström

Mr. Marten.

Aug. 15

Ministry of Finance and Planning, Nairobi

Mr. S.S. Heyer, Chief Statistician

Mr. D. Hencock, Librarian.

Aug. 16

National Archives, Nairobi

Mr. W.N. Fedha, Chief Archivist.

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Aug. 30

Kodak (E.A.) Ltd.

Mr. A. Langford - Smith, Mr. S. Munjuga.

Sept. 1

University of Nairobi, Faculty of Agriculture

Professor R.B. Contant, Dean of Agriculture.

Ministry of Finance and Planning

Mr. J. Gatuiria, Deputy Permanent Secretary.

Sept. 2

Ministry of Commerce and Industry

Mr. A.G. Barve, Assistant Director of Trade and Supplies.

Sept. 4

Horticultural Research Station, Thika

Mr. Waithaka.

Sept. 6

Research Information Service, Kabete

Sept. 7

National Animal Husbandry Research Station, Naivasha

Plant Breeding Station, Njoro

o/c Mr. McCormack.

Egerton College, Egerton

Library.

Pyrethrum and Horticultural Research Station, Molo

Mr. Otaro.

Provincial Agricultural Office, Nakuru

Mr. Pinto, Deputy Agricultural Officer.

Synopsis on discussions

Aug. 14

Ministry of Agriculture

(General Meeting)

There is a great need within the Ministry for collecting, indexing and storing documents on Kenyan Agriculture. The Ministry has committed itself to providing documentation staff and making space available for the Centre. As regards computer facilities, contact has to be made with the Ministry of Finance and Planning.

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National Veterinary Laboratories, Kabete

The library was very well organized and had files
and lists of reprints of all articles published
by the staff (there were approximately 1,000
reprints).

A lot of unprinted reports were collected in the
library but not catalogued or classified. There
are 120 Field Veterinary Offices, all of which
have books. Research Reports, however, tend to
be at Kabete, where veterinary research is concen-
trated.

Aug. 21

Ministry of Agriculture new building

A new building for the Ministry of Agriculture is
being built on Cathedral Road. This will be
ready for occupation in Oct./Nov. 1973. Three
other ministries will be located there later.
Space for the library is provided for on the
ground floor where it might be suitable to have the
photographic equipment (both for the documentation
centre and library), since this area has no
windows. The offices could be on the floor above.
(see plan).

Ministry of Natural Resources, Mines and Geological Department; Library

Of the printed material there was a published
bibliography: Dasaj, N.P.S.; Walsh, J., Bibli-
ography of the Geology of Kenya 1959-1968,
Nairobi 1970. Of the unprinted reports there is a
list in the annual report of the department
referring to the file number. The reports for the
last 10 years contained about 10 unpublished
reports each. Some of these may be of interest
from an agricultural point of view. The former
librarian of the department had published a work
on "Geological Library Services" in Africa some
years ago.

Ministry of Agriculture

(General meeting with Mr. Kibe, Permanent Secretary)

It was confirmed that Kenya officials felt the
project should start on a Ministry level and
develop to a national centre. The question of
developing to a Regional level was discussed. In
an East African connection the project would have
a low priority.

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the libraries at the Ministry of Agriculture,
Muguga, and the University. The value of an index
of articles from or about the East African countries
published in scientific journals was stressed.
UNESCO has been approached to help with such a
project.

University of Nairobi, Library

The faculty of agriculture of the University
started in 1970 and the library has not yet
developed much on the agricultural side. The three
East African University libraries try to secure an
East African collection as complete as possible
and exchange catalogue cards for this collection.
Each country is concentrating on its own literature,
most of which is received automatically from the
printers (though not always from the Government
Printer). Thus Library of Congress Programme for
organization and cataloguing has published an
accessions list for Eastern Africa since 1968
(mostly printed material, no articles).

The Indexes from a Documentation Centre would be
most useful to students and staff who cannot now
get information. There would be problems for the
Centre in getting access to theses, due to the need
to get the author's permission.

Institute for development studies (Univ. of Nairobi)

The Institute is engaged in research on the
dissemination of information in science and technolo-
gy. For this purpose a committee was organized,
representing various outside bodies, including
some Ministries. This committee has obtained a
grant from the Ford Foundation which stipulates
that they concentrate on agriculture. Research is
carried out on how to communicate information to
various groups of farmers and how to make the
information understandable. For this dissemination
function the Institute is dependant on having access
to the latest technical information and for this
reason is very interested in the establishment of a
documentation centre. The Institute will probably
be one of the major users of the documentation
centre and no duplication or effort is likely.

The release of confidential documents to the Centre
might be a problem. It was suggested that the
Government might introduce different grades of
secrecy or allow documentalists to write versions
of secret documents which could be made available
through the Centre. The problem of tracing theses
written at foreign universities was also discussed.
The rule that expatriates deposit their records
before leaving needed to be enforced.

Aug. 23

Aug. 23

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Aug. 31

Kodak Ltd.: possibility and costs of alternative microfilming equipment were discussed.

Sept. 1

Faculty of Agriculture, Chiromo

Professor Contant was quite aware of the problem to get information and thought a documentation centre would fill a great need. It would be most useful to students who have problems getting up to date information. Research is done at the faculty; reports, lectures and seminars are written up but not kept. From the Faculty of Agriculture there will be at least 50-100 unpublished papers every year to be included into the system; there will probably be more in the future. The departments of botany, geography and zoology may also have material on applied science, which should be recorded. Agricultural engineering should also be included. As regards the number of documents there will certainly be enough to keep the Centre busy, provided relevant material in other ministries, at research stations and elsewhere is included. He thought the Centre should move on to index published material, including that of interest too, though not about Kenya. The records of reprints supplied through the E.A. Literature Service should be indexed. The Centre should collect current documents from the outset.

Mr. Contant favoured the use of a computer for indexing. There was plenty of experience with computers in Kenya and it was no use introducing second rate technology. The cost of computing would go down while cost of people went up. If the computer were not used now, this would be regretted in five years time when the Centre was in full operation.

As regards the using of agricultural students as part-time indexers he thought that was a good idea. This would make them more information-minded, which would be a good thing for their future work and the country. Undergraduates are paid 600 Sh. per month when they work between terms. He said they could handle the documentation job, and that they often came looking for work.

Ministry of Finance and Planning

Mr. Gatuiria was very interested in the project and wants it to proceed. He agreed that it should start in the Ministry of Agriculture and extend to other ministries and research stations later. He asked would it be possible to start before the new building was available, with a view to obtaining donor aid in 1972/73. He suggested that several donors might be approached to ensure the project went ahead. The Mission report would be used in making submissions to these agencies. He proposed

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For the last 10 years there are records of experiments carried out by the station and the sub-stations (Matuga, Mtwapa, Molo). Some of these are, however, kept confidential for a long time.

Sept. 6   Research Information Service, National Agricultural Laboratories

This office collects reports on research from research stations. These are held under titles of various crops and the information is made available to scientists about to start research projects. The information is often rather technical and cannot be disseminated in the form in which it exists. There were about 3.2 m. of unpublished material.

If a documentation centre existed the office would hand over its records and refer questions to the Centre, as its main activities is servicing research officers with statistical designs for experiments.

Sept. 7   National Animal Husbandry Research Station, Naivasha

There is a quantity of unpublished material going back to 1929, some of which is from the field station at Eldoret. Research results from 1963 and onwards are now being prepared for publication.

Plant Breeding Station, Njoro

Most of the material at this station had been published or taken away by former scientists. Earlier material was, we were told, of little value, since new varieties of cereal do not last long and are quickly replaced. However, we estimated the material to be evaluated by the documentation centre at about 10 boxes.

Egerton College, Library

The library, which was very well organized, was mainly a working library for students and teachers. Unpublished material as well as some reprints on Kenyan Agricultures were in a special collection. The amount was not large. During recent years research work at the college has increased and reports will appear on it. The Documentation Centre would be a valuable source of information for the Staff as well as for the more advanced students.

Pyrethrum and Horticultural Research Stations, Molo

The Pyrethrum station has four sections. Most of the earlier work was published in scientific journals or summarized in the annual reports. Now each research officer has to give a full report on his research work at the end of the year. There is also a horticultural field station with some files.

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Proposed National Agricultural Documentation Centre in Kenya

(Project T.F.KEN.36(SWE))

Preparatory Mission: Terms of Reference

1. Evaluation of Government priorities and policy with respect to documentation and library expansion within the framework of overall development planning.

2. Consideration of possible related projects.

3. Consideration of the Government's arguments in favour of a national versus a regional approach.

4. Optimum geographical and administrative location of the project. The government has already indicated that the proposed project ought to come under the auspices of the Ministry of Agriculture and could function as a special section of the Ministry's Library. This recommendation ought to be reviewed in the light of local authority relationships between individual Ministries and complementarity of Library and documentation functions. In particular, it should be considered whether the Ministry of Finance and Economic Planning ought to be involved and, if so, in what way.

5. Ascertain whether the possibility for continuing the project's activities after termination of the external assistance does exist.

6. The number of documents to be identified and processed, their location and availability for processing.

7. The requirements in terms of international and counterpart personnel, equipment, supplies and premises.

8. Project duration.

9. Cost estimate of Donor and Government counterpart contributions (as detailed a breakdown as possible).

10. Availability and cost of computer and printing facilities for production of indexes.

11. If, as a result of its investigations, the mission decides to recommend the project for approval to SIDA, it should attach to its report a comprehensive project outline in accordance with the prescribed SIDA format.

Alternative method of index processing

The possibility of using an alternative type of subject index to the KWIC might be considered. The KWIC is costly in computing time; it also takes up a great deal of space so that paper and printing costs are high. In addition, some users find it inconvenient. It would be possible to alter the FAO system slightly to produce, with the computer, an index based on subject groupings. This would be cheaper and probably as useful.

This type of index can be generated by computer using a method developed at the Agricultural Institute in Ireland. This method also separates the selection of indexing terms from their checking against the authority or keyword list. To separate these operations may be an advantage during the period when staff are gaining experience in indexing.

Terms are chosen freely from the documents in the first operation. They are then arranged in alphabetical order by the computer; the identification numbers of the documents from which the terms were chosen are listed after each term. Next, the freely chosen terms are marked with the numbers of subject headings from the authority list under which they are to be grouped. The authority list may be the FAO or AGRIS thesaurus. The computer then rearranges the document numbers under the authorized subject headings (see references, Appendix C).

The resulting computer output contains the authorized subject headings followed by the numbers of the documents indexed under each. It can readily be printed by photo-lithography.