

INFORMATION NEEDS OF AGRICULTURAL SECTOR:

THE ROLE OF THE LIBRARIAN

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A B S T R A C T

Kenya depends almost entirely on its economy. The Government view is that adequate food production and security is a national priority. Approximately 35 million people will have to be fed by the year 2000, from the arable land. Surplus agricultural produce is useful in earning foreign currency and for national reserves. Improved Communication and Information Infrastructures within the sector is a vital prerequisite for development. The usefulness of the current information infrastructure is recognised. Formal research on all the user groups information needs and in particular those of the researcher, front line extension worker, and the farmer is a must. Effective role of the front line extension worker and the Librarian in current and future information dissemination process is vital.

INTRODUCTION

KLA has come up with a very interesting and appropriate theme for the annual seminar this year. "Information for sustainable food security is a theme that is thrilling to all social levels and ages of the Kenyan populace. Nothing could be more satisfying than the assurance of food availability and sustainability to human life. Money or even precious stones cannot buy food if it is not there. Human life cannot be sustained without food or nourishment, and like water and air, food is indispensable.

Many developing countries depend almost entirely on agriculture for their economy, Kenya is no exception. Its population which currently stands at over 24 million has to be fed. With the rapid population growth, Kenyan population has increased from 8.9 million in 1963 to 24.4 million in 1993. The size of the arable land remains the same and will never change in size. This land is expected to produce enough food to feed approximately 35 million people in another four years i.e. the year 2,000. This in itself is a big challenge to us Kenyans considering that surplus food has to be produced for export and for the manufacturing industries. Cash crops e.g. coffee and tea have to be produced for local consumption and for export so as to be able to earn foreign exchange.

The development of the Agricultural Sector is a national priority as exemplified in the current National Development Plan 1994/96 thus:

"While it is recognized that all the economy must grow rapidly to meet the challenges of the 1990s the agricultural sector must grow even faster".

Several reasons are given in support of the above statement that:

- the sector is a major foreign exchange earner.
- about 85% of the population live in the rural areas.
- about 75% of the labour force is employed by this sector.
- it provides nearly all national food requirements and raw materials to the industrial sector.
- it accounts for 30% of the Gross Domestic Product.

Increased production in the agricultural sector will require investment in Improved Communication Infrastructures such as roads, railway etc. Properly co-ordinated information infrastructure to continually provide faster and more rational flow of agricultural information is a must, while technological support to the farmers through the research and extension services is necessary.

This paper will look into the information needs of the users within the Agricultural sector. The role of the Librarian in meeting these needs will be discussed. The term Librarian in this paper will represent all other terms such as the Documentalists, Information Scientists and Information Workers.

1. Kenya National Food Policy

According to the Sessional paper no. 1 of 1993 on National Food Policy, the country should continue with the major policies as spelt out in the Sessional Paper No. 4 of 1981, on National Food Policy.

The overall objectives of this policy are to:-

- maintain a position of broad self sufficiency in the main foodstuffs in order to enable the nation to be fed without using scarce foreign exchange on food imports.
- achieve a calculated degree of security of food supply for each area of the country.
- ensure that these foodstuffs are distributed in such a manner that every member of the population has a nutritionally adequate diet.

"The Ministry of Agriculture, Livestock Development and Marketing is charged with the responsibility of co-ordinating the implementation of the food policy including the National Food Security Action Plan and the Drought Contingency Action Plan, working closely with relevant ministries and other government agencies" (Sessional Paper No. 1 of 1993 on National Food Policy). The Policy advocates for greater efforts in the areas of food production and distribution.

In as far as food security is concerned, Kenya government safeguards food security through the maintenance of food reserves. The

treasury is required to maintain a foreign Currency Food Import Fund which should be adequate to meet Food Imports for at least three months requirement.

The Librarians within the agricultural sector and related areas should be fully aware of the government's policies in this field. They are expected to have in safe custody all the policy documents and be able to do an alerting or current awareness service to their respective clientele. Policy information should be at their fingertips in readiness for any question and answer service.

2. Kenya Agricultural Information Infrastructure

Agricultural sector takes precedence in the development of the National economy. It is imperative therefore that the provision of agricultural information is a national priority. Like any other input in the development of the economy, information has its place as one of the vital resources. Other resources include farm inputs, equipments, arable land etc. It only differs from those other resources in that it can be shared liberally within the national and international circles yet be retained. Information technology has provided an enabling environment for the Librarians to co-operate through transfer of information. Database searching on CD-ROM is for instance common place within the major agricultural libraries in Kenya.

Availability and transfer of agricultural information i.e. from the researcher to the farmer and vice versa is a fundamental and essential prerequisite to the development of Kenya economy.

2.1 Local Libraries and Information Centres: State of the Art

A previous paper (Kavita, 1990) covers the operations of the agricultural libraries and information centres. This paper will briefly mention the main services and recent developments if any.

2.1.1 Ministry of Agriculture Library

- Mainly serves the Ministry of Agriculture Livestock Development and Marketing (MALD & M) staff.
- Offers reference and information service to the Ministry staff and external users.
- Participates in inter-library loan service.
- Currently using a micro-computer for cataloguing.

2.1.2 KADOC (Kenya Agricultural Documentation Centre)

- recently re-located in Kabete within the Agricultural Information Resource Centre (AIRC) buildings.
- Inputting centre for AGRIS Information System.
- Mainly serves researchers and MALD & M staff.
- Provides SDI Service using its Kenya Agricultural Abstracts and other International abstracts on CD-ROM.

2.1.3. Agricultural Information Resource Centre (AIRC) formerly AIC.

- has a functional library
- simplifies research reports and recommendations into leaflets and pocket hand books for use by the extension staff and farmers.

- disseminates information through the Broadcasting media i.e. (radio and TV) posters, cinema, slides, photos and films.
- translates the above literature into Swahili (National Language).
- runs rural youth programmes.

NB:

Ministry of Agriculture was recently expanded to include the Livestock Development and Marketing aspects of the Agricultural Sector.

2.1.4 The Veterinary Research Laboratories (generally referred to as vet labs) Library

- has a large collection on veterinary medicine and natural sciences.
- Ndoba, Kabete and Nyahururu Animal Health Training Institutes Libraries form its branches.

2.1.5. Kenya Agricultural Research Institute (KARI) Library

- has various branches in the field research stations.
- runs the Kenya Agricultural Research Database (KARD) which aims at benefitting the researcher and the farmer through extension. It provides information through other retrieval tools which include CAB/International (Commonwealth Agricultural Bureau International) Database on CD-ROM.
- Kenya literature service temporarily stopped due to financial constraints.

2.1.6 KENSDOC (Kenya National Scientific Information
Documentation and Communication Centre)

- referral centre for science and technology.
- mainly serves the National Council for Science and Technology (NCST) staff.

2.1.7 Academic Agricultural Oriented Libraries

- University of Nairobi, College of Agricultural and Veterinary Sciences Library.
- Egerton University Library.
- Moi University Library (Houses mainly Forestry materials)
- Jomo Kenyatta University of Agriculture and Technology (JKUAT) Library.

NB: They mainly serve staff and students community. They relate with other other national and international libraries through interlending and other services.

2.1.8. Agriculture and Veterinary Oriented International Organisations

Kenya hosts quite a number of these organisations. They include ICRAF (International Council for Research in Agroforestry) ICIPE (International Centre for Insect Physiology and Ecology), ILRI (International Livestock Research Institute - formerly ILCA & ILRAD), and UNEP (United Nations Environmental Programme).

Useful publications emanate from these organisations while their respective libraries are a wealthy source of information for the agricultural sector needs.

Other very resourceful international bodies include FAO (Food and Agriculture Organisation, CABI, CTA (Centre for Agricultural and Rural Co-operation), IDRC (International Development Research Centre), IAALD (International Association of Agricultural Libraries and Documentalists).

The Librarian should be able to disseminate information gathered from these organisations and disseminate it to the various groups of users within the sector.

3. Information needs of Agricultural Sector

As reported by Woolston (1983), the FAO's old estimate is that the world produces 250,000 new documents per year in agricultural science and technology. In this regard, the role of the librarian is to make sure that he has defined his users' requirements or needs and then selectively acquire the relevant material for their use in their day to day activities. He has to process (catalogue, classify, index, abstract as need be) this information for easy retrieval. Library Co-operation in acquisition and inter-lending is necessary because no single library could be self sufficient.

3.1 Finding out the Information needs for Agricultural Sector

Two alternative generalised ways in which one can view user information needs are the subjective view and the objective view. The subjective view is that which considers only the information which the user himself recognises as necessary for his own purposes. The

objective view on the other hand considers both the needs recognised by the user, and that which the information provider (Librarian) finds useful to him as a result of deliberate scanning or searching with a knowledge of the users work or profile.

The parameters to consider when determining the user needs are speed, relevance, timeliness, volume, cost, comprehensiveness, presentation and comprehensibility. The later parameter is very crucial when providing information particularly for use by the lower levels of the extension workers in the sector.

The agricultural sector comprises various agricultural information user groups. It is therefore imperative that each user group will be considered separately but as corporates of the agricultural sector.

3.2 Information Requirements of Agricultural Researchers

Researchers work is pre-eminent in the development of the agricultural sector. Unlike the research commonly carried out in the universities and other institutions, the type of research done in the agricultural research stations is applied research. The researcher requires the following types of information:-

- climatic conditions of the areas in which they are to carry out their research.
- demographic and socio-economic conditions of their areas of operation for adoptability.
- results of other research findings to avoid duplication.
- feedback from the farmer about the applicability of their innovations or results.

3.2.1 Information Seeking Habits of Research Workers

The information sources include:-

- informal channels of communication i.e. through the technological gate keepers, personal or group contact during meetings, conferences etc.
- formal channels i.e. primary literature (journals, reports etc.), secondary literature (Abstracts, indexes, monographs), and tertiary literature (textbooks).

3.2.2 The Role of the Librarian in Meeting the Information Needs of Research Workers

The Librarian is indispensable in furthering agricultural research. Other than developing a relevant stock in the library, the librarian has to work closely with this user group. Researchers are information generators in that they publish widely in scientific and technical journals. They also do read widely to avoid duplication of research undertakings.

The Librarian should continually provide current awareness service to this group through the personalised service or SBI and any others e.g. controlled circulation of current journals, displays etc. This group should also be assisted in their retrospective searches e.g. in the manual abstracts and indexes, databases etc.

3.3 Information Requirements of the Extension Workers

Extension workers form a direct link or interface between the researcher and the farmer. This group is generally in three levels i.e.

- (i) Agricultural officers (graduates) who co-ordinate extension services from the MALD & M Head quarters through the provinces right down to the locational level. At locational level the co-ordinator may be a diplomate. This group's work is more administrative than practical.

- (ii) Front line extension workers actually work hand in hand with the farmer. These include the Technical Assistants at Certificate level, Agricultural Assistants and Junior Agricultural Assistants below the certificate level. The Animal Health Assistants and Junior Animal Health Assistants also form this group of front line or grassroot extension workers.

- (iii) Extension staff employed by parastatals e.g. the Kenya Breweries, Cotton Lint and Marketing Board, Coffee Board of Kenya, British American tobacco, Horticultural Development Authority etc. This group is properly equipped for its work and has to keep within the policies of the parastatals concerned.

The extension staff particularly the co-ordinators and the front line staff require information on:-

- ecological zones of their operation.
- existing communication infrastructure.
- government policies regarding farming methods.
- packaged information to enable them interact with the rural farmer.

3.3.1 Possible Sources of Information for Extension Workers

AIRC is a primary source of the extension information as noted earlier. They package information for easy use by the rural farmers, majority of whom are illiterate. These include charts, leaflets, films etc.

3.3.2 Problems affecting the Use of Information by the Field Level Extension Workers.

- poor public relations.
- high illiteracy levels among the community.
- poor or no communication infrastructure.
- high staff: farmer ratio.
- Farmers' Training Centres Libraries are not properly maintained.

3.3.3 The Role of the Librarian in Meeting the Information Needs of the Extension Staff

The Librarian should interact with extension staff at the higher level. They make decisions on extension programmes and as a result need to be fed with current information on government policies. Information on new innovations in agriculture is necessary if the farmer has to be advised appropriately. Farmers' training centres libraries ought to be fully equipped with materials needed for field work. They should be made into rural resource centres for extension. Respective District Development Committees (DDCs) could be consulted for the required funding.

3.4 Information Requirements for the Farmers

Farmer groups can be stratified into four groups:-

- peasant farmers (small scale farmers)
- pastro - nomadic groups mainly found in the marginal lands.

- large scale farmers (individuals or groups).
- progressive farmers - (usually professionals e.g. teachers) who act as contact farmers.

The large scale and progressive farmers are usually able to locate their answers to problems or needs quite easily. They are generally literate and interact well with the extension staff. This paper will specifically look into information needs of the peasant farmers. This group accounts for 70% of the rural population and contributes substantially to the agricultural sector.

Several problems are identified with this group thus:-

- low per capita income.
- low productivity.
- poor communication infrastructure.
- inadequate nutrition.
- lack of credit facilities without title Deeds (mainly women get affected because they culturally don't own land).

They require information on:-

- crop varieties.
- soil conservation.
- innovations e.g. farm equipments.
- marketing of farm products.
- credit facilities.
- input prices e.g. fertilizers
- government policies on general issues such as afforestation, soil conservation, irrigation etc.

3.4.1 Information Seeking Habits of the Peasant Farmer

This community is familiar with verbal communication and physical demonstrations. They as a result depend on colleagues, extension workers and progressive farmers for their information. The following methods are used by extension staff to disseminate information to the farmers thus:-

Leaflets, posters, photographs, pamphlets, films, radio and TV broadcasts, rural youth (change agents) programmes, T & V (Training and Visits), field days, chiefs' barazas, monthly workshops, fortnightly training sessions, women groups - recently found to be very useful in information dissemination to the peasant farmer. (Mathangani, 1989).

3.5 Information Requirement of Agricultural Administrators (Policy makers, planners etc).

This user group has to make decisions always and has to keep within the Government policies and programmes. Like general medical practitioners, they have no time and patience to undertake long information searches.

Administrators have a tendency to keep what one would call working tools in their offices. This may include documents such as the Annual Estimates, Development Plans, Laws of Kenya, Annual Reports, etc.

This group hardly uses the library and tend to communicate through memos and phones.

3.5.1 Librarians Role in Meeting the Needs of the Administrator

The Librarian should be able to help them to organise and update the documents e.g. the Laws of Kenya. He should encourage them to come to the Library through general publicity e.g. mounting relevant displays and exhibitions etc. Personalised current awareness services e.g. controlled current journal circulation and SDI would be useful.

3.6 Information Requirement for Educators in the Colleges and Institutions of Agriculture

Unlike teachers in the lower colleges e.g. Embu Agricultural Staff Training Centre (formerly Embu Institute of Agriculture), the lecturers at the University level tend to combine research projects with their teaching responsibilities. Other than teaching materials, the lecturers will require information similar to those of the researcher, covered earlier

For teaching purposes, this group needs, primary scientific and technical journals, digests, book reviews, and text books.

Formal current awareness service is recommended for this group of users if they are to come up with useful curriculums for current and future agriculturalists.

CONCLUSION

The role of the Librarian in satisfying the information needs of the agricultural sector is crucial. His is a pivotal role in that all

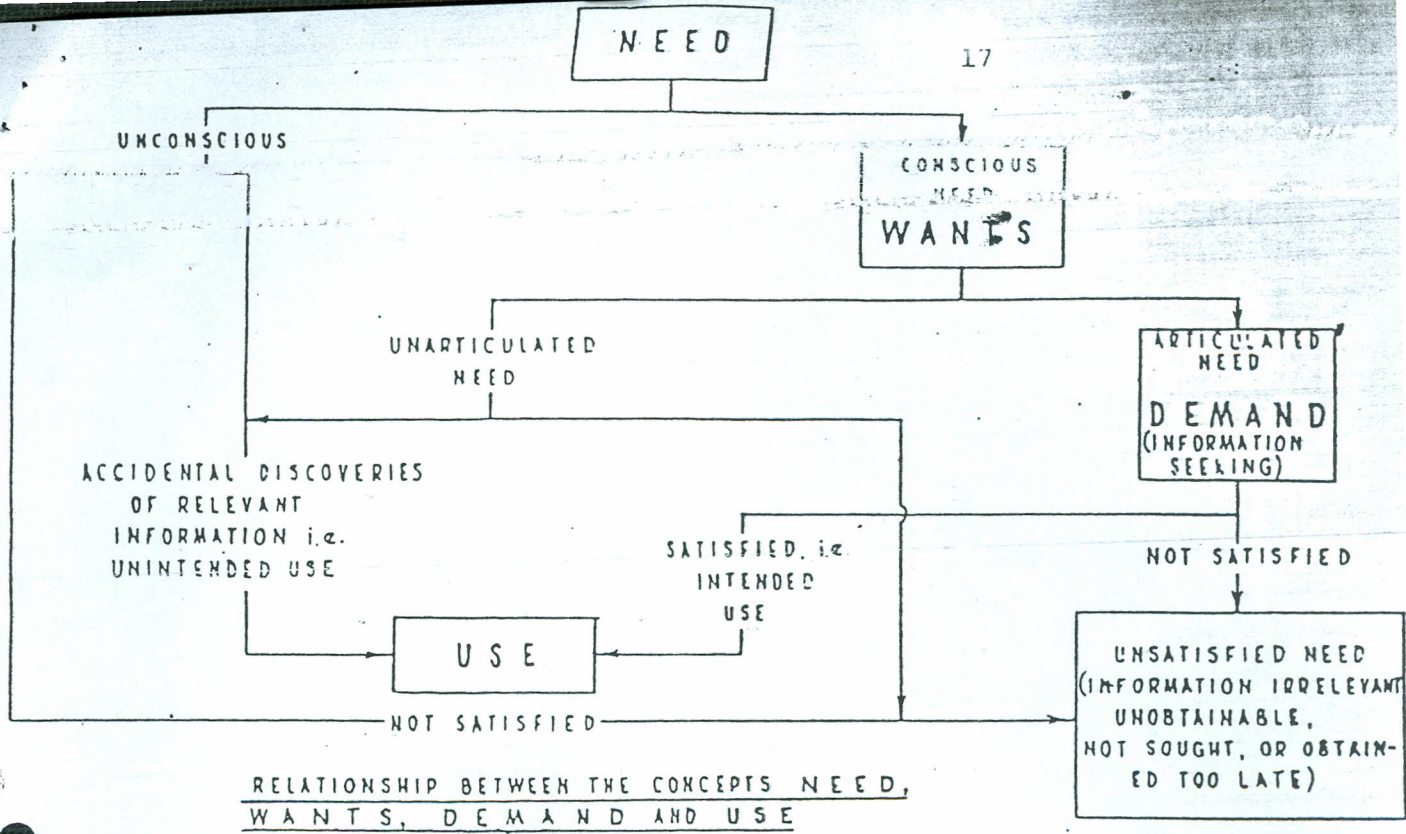
activities which involve articulate planning and decision making require timely and relevant information.

The words by (Woolston, 1983) are appropriate in summing up the role of the librarian in the agricultural sector:-

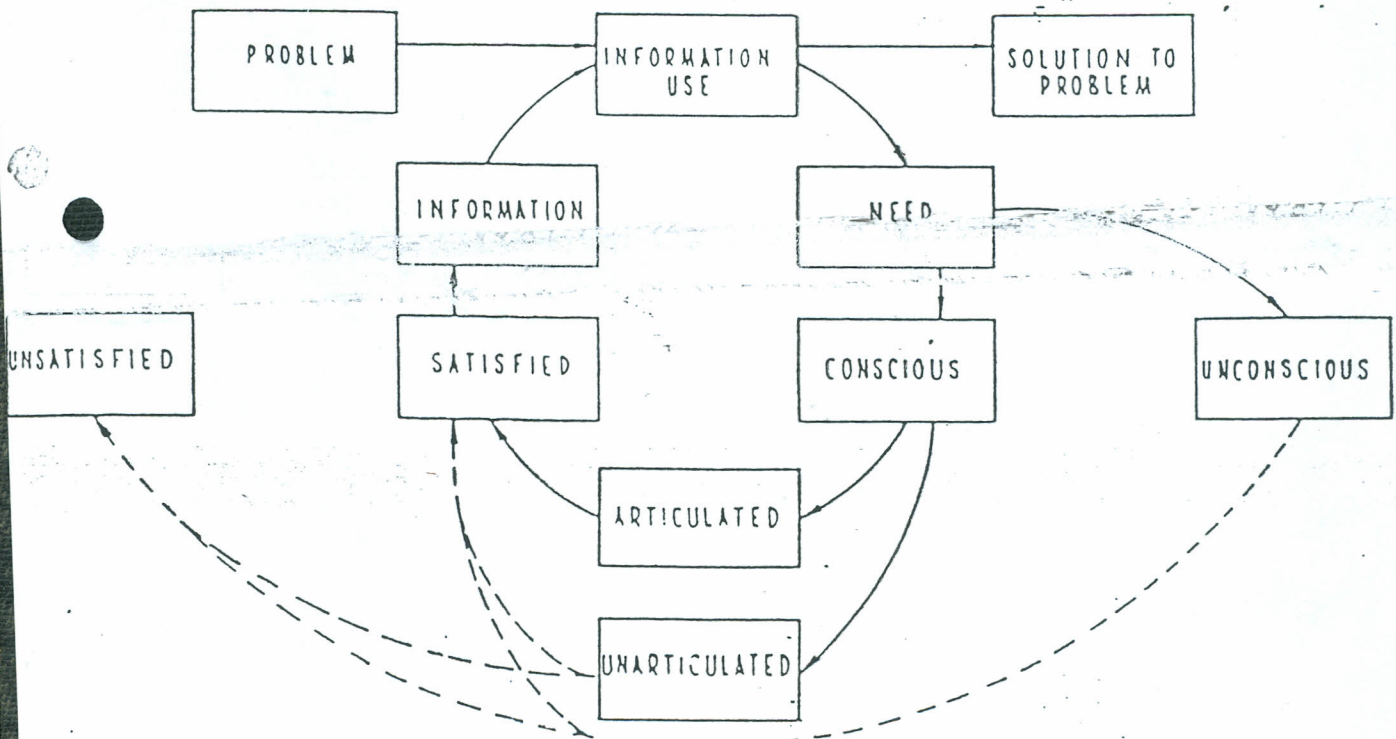
"The recognition will come when we can show what we have done to improve agricultural production, and when the other groups within the agricultural community tell the authorities that they need the services we provide".

The Librarian in the agricultural sector should have an ultimate goal of becoming an active contributor in food production and security. His immediate role is that of satisfying the information needs of this sector for better yields.

Finally, there is an urgent need for research on user information needs in the agricultural sector. It is by articulating the information needs first that the Librarian could provide relevant information.

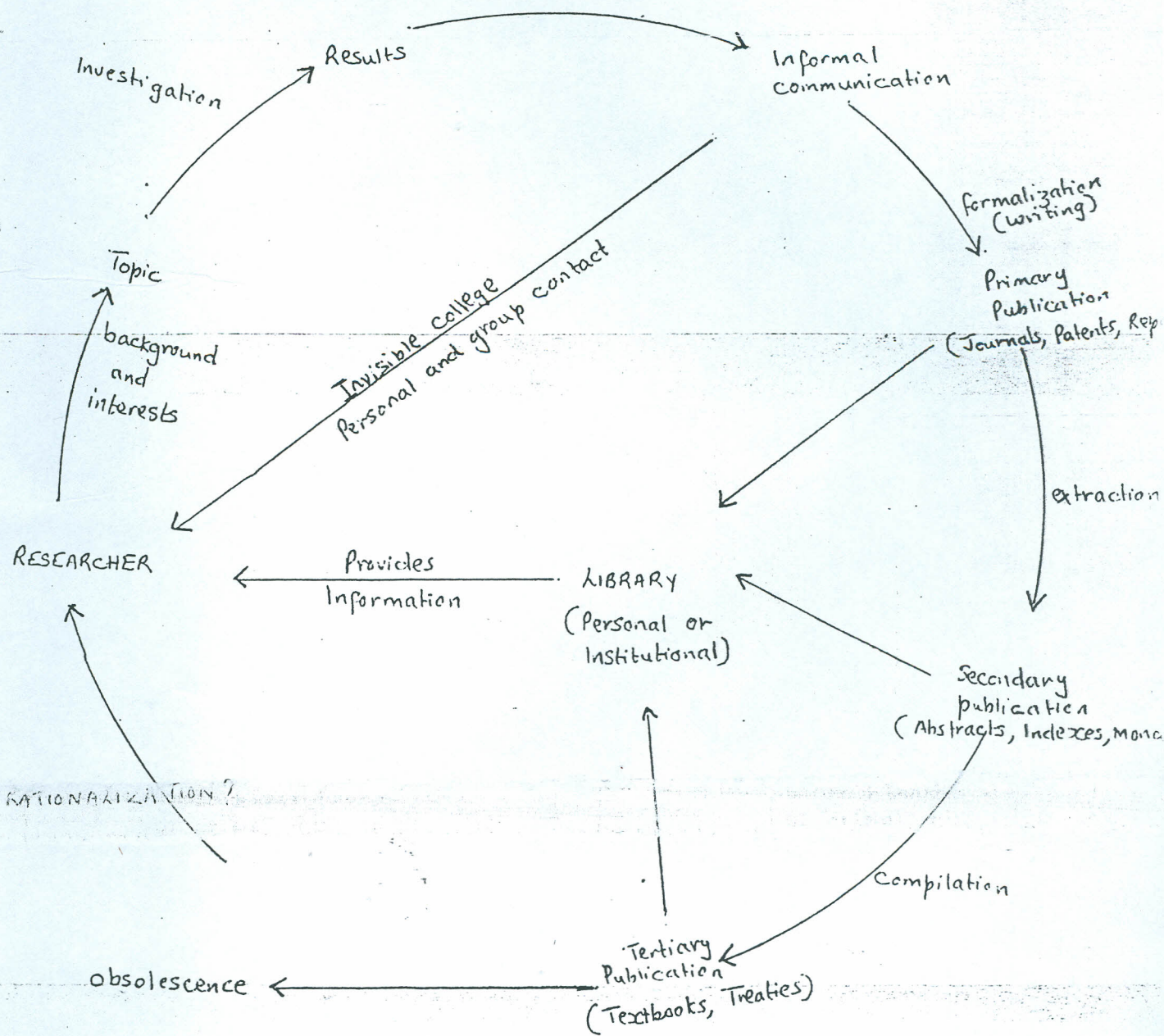


RELATIONSHIP BETWEEN THE CONCEPTS NEED, WANTS, DEMAND AND USE



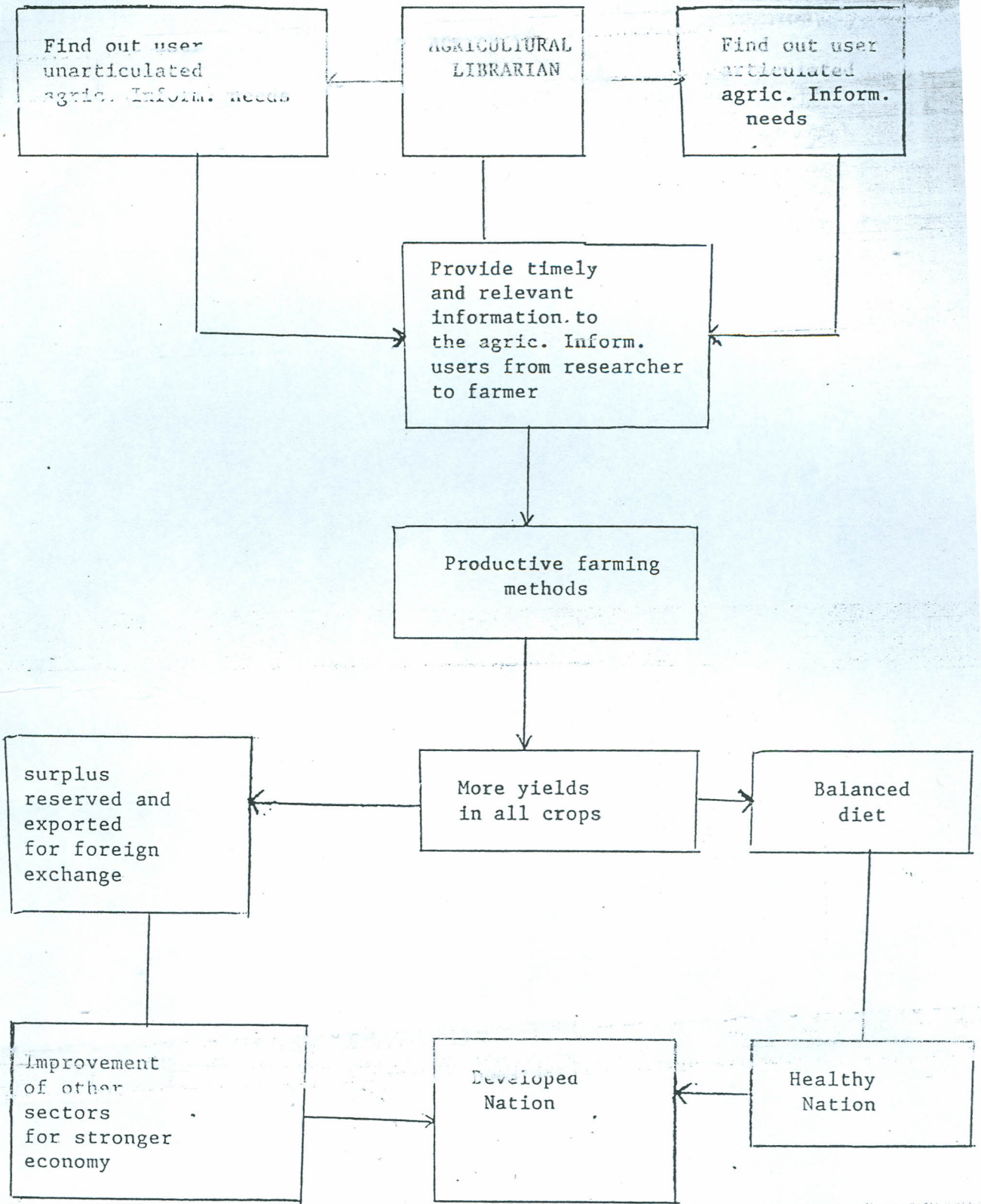
THE INFORMATION NEED / USE CYCLE

source: LOR P.J. 1979 IN Kaigi (1983)



THE RESEARCH INFORMATION CYCLE

Adopted from : REDMOND D.A. et al. 1972. IN Kaigi (1983)



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