

Laboratorio di Coltivazioni tropicali

Attua lo scambio di informazioni tecniche e documentaristiche in materia di coltivazioni tropicali (preparazione di bibliografie complete e specifiche) con numerosi Istituti italiani ed esteri. Scambia con i medesimi materiale da riproduzione di piante tropicali.

Compie attività di ricerca su alcune piante di provenienza tropicale, particolarmente cotone, arachide, soia, girasole, in ambiente temperato caldo italiano.
Compie attività di conservazione e produzione di piante tropicali riprodotte in serra calda.

Laboratorio di difesa delle colture, tropicali.

Questo laboratorio provvede al lavoro di collezione, identificazione e schedatura delle specie raccolte in collaborazione con i principali musei esteri; esegue ricerche monografiche in sede ed ai tropici; presta un'attiva consulenza fitopatologica ad operatori economici in Africa ed è collegato con Istituzioni analoghe all'estero. È ripartito in settore entomologico ed uno fitopatologico.

Laboratorio di Agronomia.

Svolge attività di ricerca e sperimentazioni relative a tecniche di preparazione e conservazione del suolo.
In campo pedologico ha al suo attivo numerosi studi di cartografia e classificazione di terreni di paesi dell'area intertropicale.
Gestisce un laboratorio di analisi chimiche e fisiche.
Svolge anche attività di consulenza ed assistenza tecnica in settori specifici ma con particolare riferimento a problemi di irrigazione, drenaggi, fertilizzazione.
Mantiene rapporti con Enti similari ed Uffici operanti in campo internazionale nel settore dell'agronomia generale e applicata e tiene aggiornati uno schedario e raccolte di riviste.

Osservatorio di Economia agraria tropicale.

Cura la pubblicazione e i lavori di ricerca nel campo economico dei Paesi in via di sviluppo tropicali.
Partecipa a Convegni e seminari relativi a questo settore per aggiornamento culturale e documentario.

IBBD AND ITS PARTICIPATION IN AGRIS & CARIS PROJECTS

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I. INTRODUCTION

In Brazil people involved in documentation work keep a great interest in international programmes in the field. It may be due to the fact that, as intermediaries, they find relevant information in international bibliographical services but it may also be a part of relevant information, at national level, is not incorporated to international scientific documentary network.

Studies in the field will soon be developed, for at this very moment, the Federal Government is taking the necessary steps to create the National Information System for Science and Technology (SNICT) which foresees the participation of national systems in international ones. Preliminary studies gave IBBB the role of supporting information agency for the System and sectorial subsystems are being designed.

According to the structure of the System, as indicated by Government plans, it will be decentralized in its operation and centralized in its coordination. National Research Council will be the central organization of the SNICT.

Being the Brazilian Institute for Bibliography and Documentation - IBBB - a central agency since its foundation, studies are being developed as to which services should be decentralized.

This paper deals with IBBB's new role and compatibilization with related programmes that will be developed by the Subsystem for Scientific and Technical Information for Agricultural Sciences. It can be advanced that this one is being designed to work in close cooperation with Agris, and will have the assistance of FAO, through and international programme.

2 - BIBLIOGRAPHIC ACTIVITIES OF IBBB

As a national documentation centre the Institute is responsible for the production of special bibliographies in the field of Social Sciences, Law, Mathematics, Physics, Chemistry, Botany, Zoology, Medicine, Agricultural Sciences, Engineering and Amazonia, this last one with international coverage.

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The growth of literature was not accompanied by the correspondent growth of personnel and, together with some other internal difficulties, it was not possible to maintain the referred bibliographies updated.

A solution to the problem was sought. First studies were initiated in 1968 and they showed that work done by conventional processes needed 5 times more than that by automated processes. In this case bibliographies could be updated without having to hire new personnel. KWIC indexing proved to be the best one to initiate because it could be developed with a small group of qualified personnel besides being a relative simple system.

Initial studies and tests were very hard because no one in the group had any kind of experience and at that moment, it was not possible to have foreign knowhow.

After successful results a research programme was established to develop an integrated system for those bibliographies prepared at IBBD and through this system in 1972, all the national bibliographies published by the Institute were updated.

As it can be seen this very interesting project provides the means to control the dispersion of literature and because, of it, the Institute will be able to cooperate with Agris project in a more effective way.

3 - INTEGRATED SYSTEM OF AUTOMATION OF SPECIAL BRAZILIAN PERIODICALS.

The main goal of this project was the reduction of time and of qualified personnel. It avoids duplication of work and permits some exhaustivity in the indexing of special literature which is scattered in related areas. This methodology avoids losing these informations which certainly occur, as stated by Bradford's law. Every article in the periodical is indexed only once and it is tagged in such a way to permit its retrieval in every field of knowledge that it may concern.

The implementation of this project has deeply modified the previous processing structure of special bibliographies. Collecting, recording and retrieving of Brazilian scientific and technical literature are made now as a whole and not separately for each bibliography, as before.

The input form for the system is punched cards. Data will constitute a central file from which, through special tags representing each field covered by IBBD bibliographies, other files will be generated. Brazilian special bibliographies will be one of the outputs of these files.

The system uses the KWIC permuted index with addition of some descriptors to enrich non-specific titles of papers. These descriptors are based on well-known subject lists such as those of Engineers Joint Council, National Agricultural Library, and others, and they will help to construct, in the future, our own

authority list.

The adoption of the KWIC index for each field of special literature was always preceded by isolate study of its terminology. This study tried to test the applicability of KWIC in different fields of knowledge.

As we know, some areas have well established and specific terminology and, of course, this allows titles of documents to be more representative of its contents. In this case, higher rate of relevance is achieved. In an integrated system of bibliographies of different subjects, the question of terminology arose as well as the establishment of only one list of non-significant words for the general system. Studies of these words were made and now the system works not only with one general vocabulary of non-significant words but also with specific ones for each field covered.

The system can retrieve data on original language of documents, date of publication, types of records (articles of periodicals, monographs, patents, reports, conferences, reference work, theses or dissertations, abstracts, provisional papers), publisher, whether national or not, periodical title, author and keywords.

4 - BRAZILIAN BIBLIOGRAPHY OF AGRICULTURAL SCIENCES

The first issue was related to the period 1956-58. Because of the difficulties mentioned above there is a gap for the period 1959-1966 and it was continued by electronic processes since 1967.

In the meantime the Secretary of Agriculture of the State of Sao Paulo began publishing *Índice de periódicos v. 1. 1960/63.*

In the issue of 1969 there is a list of 205 Brazilian periodicals indexed. They are classified as: research periodicals (40 titles), scientific and technical periodicals (46 titles), rural extension and periodicals devoted to general readers (104 titles). Besides these, 15 foreign periodicals occasionally include papers of Brazilian authors.

A survey on leading international abstracting and indexing services on Agricultural Sciences shows that only 32 Brazilian periodicals are indexed. Of these, 25 are core periodicals and 7 are fringe periodicals.

According to the classification mentioned above, of the 25 core periodicals indexed by international bibliographical services, 15 belong to "research periodicals" group; 6 to "scientific and technical periodicals" group; 2 to "rural extension" group.

It can be observed that only 37.5% of the research periodicals are integrated into the international scientific network.

These data make us suppose how important the participation of IBBD as a national input centre could be. The 25 missing research periodicals titles could be provided by the system right now and further studies should be done in order to include other relevant periodical titles which are of interest of Agris but which are not indexed in the BBKA because they are not considered within its scope.

Another point to be stressed is that these periodicals are not regularly indexed in the majority of international bibliographical services, as stated by Commonwealth Agricultural Bureaux, for instance, in its several "lists of periodicals indexed". Also, they do not include Brazilian Government reports as stated by "Animal Breeding abstracts", "Nutrition abstracts and reviews" and "Forestry abstracts".

Generally speaking, it is known that international bibliographical services adopt criteria of selection of titles of periodicals for regularly indexing or abstracting.

A study was initiated at IBBD¹ to prove that selection of input based only on periodicals titles missed relevant papers. This study was made with data from BBKA for the period of 1969 which included 4,848 bibliographical references distributed as follows:

- 3548 periodicals articles (from 205 periodicals titles)
- 11 preprints
- 211 abstracts
- 576 monographs (pamphlets, reports)
- 390 analytical references
- 112 theses

The periodical that produced the highest number of articles was one of rural extension, with 249 articles. Among the research periodicals, the first, in decreasing order of production, generated 72 articles and was the 8th in the rank of periodicals indexed.

The table next page shows the place position of research periodicals in national literature that produced the highest number of articles in the year.

The total number of principal authors that published their papers in research periodicals amounted to 376 with 960 articles. Among these authors 97 (25,8%) scattered their production in on research periodicals with 199 articles, which represents a percentage of 21,7% of the 960 articles. The same authors produced 761 papers in research periodicals, that is 79,3% of articles.

¹ ZAHNER, Celia R. & CHASTINET, Yone S. - Integração entre os sistemas nacionais de informação científica e tecnológica e de Agricultura. Trabalho apresentado à 3a. Reunião Interamericana de Bibliotecários e Documentalistas Agrícolas. Buenos Aires, AIBDA, 1972. 15 p. mimeo.

Research periodicals that produced the highest number of articles	number of articles produced	Rank order in the list of periodicals indexed
Anais da Escola Superior de Agricultura Luiz de Queiroz	72	8th
Bragantia	63	10th
Revista da Faculdade de Medicina e Veterinária da USP	41	20th
Conjuntura Econômica	39	21th
Revista de Medicina Veterinária (SP)	36	23th
Pesquisa Agropecuária Brasileira	33	25th
Boletim de Indústria Animal	31	27th

In other words, when an international abstracting or indexing service uses the quality of the periodical as the only selective and subjective criteria for inclusion, a representative percentage of relevant literature will be missed as shown in the above study, at least in the case of Brazil.

Through the integrated system used at IBBD, there is the possibility to have a quick and easy solution for this problem. We are able to provide not only all the literature concerned with research periodical titles but also, through adequate computer programmes to retrieve from the titles of non research periodicals those relevant articles which are produced by the core authors of the research periodicals.

Compatibility

A study was made of common data between SIABE and AGRIS format and only 3 kinds of data were not included in IBBD's system: academic degree, English titles and ISBN. This last datum cannot be included because studies in regard to this standard are now in process.

Among the Common data it can be specified:

- a) Authors: In IBBD's system personnel and corporate names have the same tags, but it should not constitute a problem because

corporate names are codified. This makes possible their identification and retrieval. As to personal names, retrieval and possible through a match programme.

b) The specific problem of compatibility IBBD has to face are data on congresses, conferences etc. For these abbreviations are used, due to the limit of characters that the programme imposes to the main entry. In this case some devices can be developed to complete this kind of information automatically.

c) Data on edition, imprint and collation do not have fixed field or code because there is no need to retrieve these data. However, if considered important to AGRIS, studies of compatibility will be made. Publishers can be retrieved through its specific code recorded in another area.

d) There are some differences among types of records, bibliographical level and literary indicator used by AGRIS and those used by IBBD. This can be solved through some changes in our input.

5 - IBBD AND CARIS

Data bank of IBBD is being developed naturally as a consequence of automated processes of its several programmes. It consists of five data bases: 1. data for identification and location of periodicals; 2. bibliographical references of Brazilian authors; 3. data on institution; 4. data on researchers; 5. data on research in process. Now a project pilot in the field of Chemistry is being developed.

We say that it is being developed naturally because IBBD acted, since its foundation, as a central agency for scientific documentation. So, it had the task to collect and process several types of data. Now that sectorial subsystems are being designed some functions of the Institute will be transferred to them.

As to sectorial subsystem for Agricultural sciences, on its request, IBBD is making the necessary studies to design a compatible data bank.

In relation to researchers and research in processes, studies of common data for input with CARIS are being made.

To begin with, collection and evaluation of data would be the responsibility of the subsystem while data processing would be in charge of IBBD.

Data collecting has been proving to be one of the biggest difficulties because of the size of the country and because of the lack of communication in some regions.

The only difference between the centralized and the decentralized processes is that IBBD used to collect data to publish directories

Now subsystem will probably do this. Through agreements with that subsystem IBBD will be able to have access to these data that will give to the Institute among other studies, possibilities to know scientific and technical potential.

So, the responsibility of sending data to CARIS would be with the subsystem, even though IBBD would receive also the same data to its bank.

The biggest difficulty to IBBD is to get compatibility with both systems: the Brazilian subsystem and CARIS.

6 - CONCLUSIONS

6.1 - IBBD's role in Agris project

According to Frauendorfer's "Classification scheme of Agricultural sciences" it can be observed that, in order to cooperate as input centre for Agris Project, further studies will be needed. Some subjects in the above referred scheme are included in the Brazilian bibliographies of Social sciences, Chemical technology and Medicine.

In terms of titles of periodicals it will not be difficult and, once established the relevant titles, the SIABE can provide adequate output, as a by-product.

In regard to different kinds of material it is evident that IBBD can be responsible for sending references of periodicals articles. The subsystem for Agricultural information, now being established, is intending to act as a clearinghouse for Government reports and monographs. In this case this Subsystem would be in charge of sending this kind of information to AGRIS.

Theses and dissertations are important material to be covered also. IBBD has already made some propositions to the Department of University Affairs in order that they establish a clearinghouse and, through special agreements, send their bibliographical data to IBBD. Being responsible for national special bibliographies the Institute is supposed to have in its Systems all the types of information including theses. So, IBBD would also be in conditions to be the National input centre for theses and dissertations.

7.2 - IBBD's role in CARIS project

In relation to CARIS project the role of IBBD is that of coordination and a big effort should be done to have compatibility within the country and, at the same time, with international programmes. But the information of interest of CARIS project would be sent directly by the sectorial subsystem, even though IBBD would have access to them.

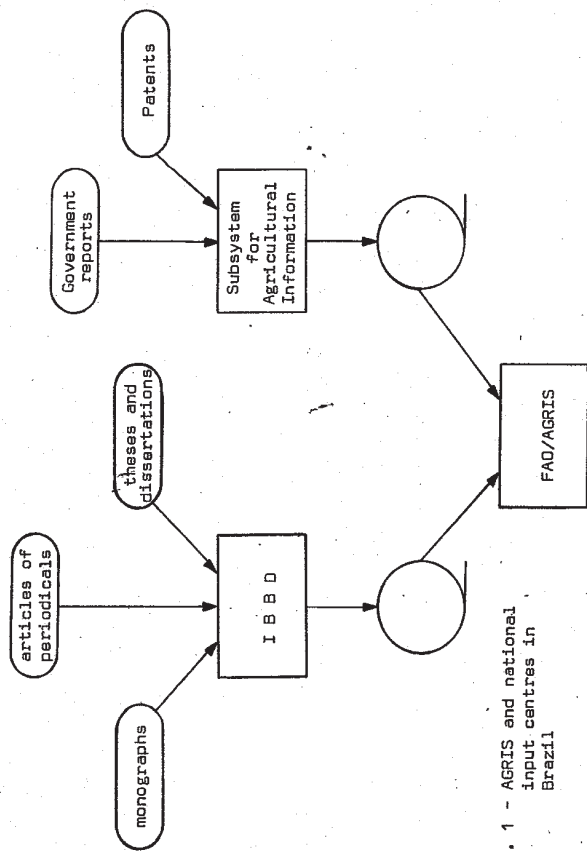


Fig. 1 - AGRIS and national input centres in Brazil

The interest of IBBD to participate in international information activities is due to the fact that, being a supporting agency for the SNICT, IBBD is in charge of studies of compatibility at national level. As a consequence it is interested in compatibility studies with international activities, as, for instance, AGRIS, MEDLARS, INIS, to assure that national relevant information be included in international scientific documentary network.